

# LOS ALAMOS

**Los Alamos National Laboratory**  
**Los Alamos, New Mexico 87545**

DOCUMENT NO. CGRP-0012-004, R1

## **PROJECT EXECUTION PLAN**

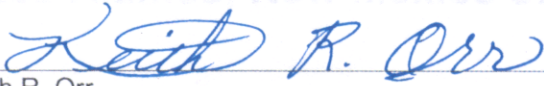
**Revision No: 1**  
**Revision Date: September 5, 2001**

## **EMERGENCY OPERATIONS CENTER REPLACEMENT AND RELOCATION**

**UNIVERSITY OF CALIFORNIA**  
**LOS ALAMOS, NEW MEXICO 87545**

**LIP 01-D-702**  
**LANL PROJECT I.D.**  
**NO. 100143**

**CONTROL**  
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**Approvals****For Los Alamos National Laboratory:**

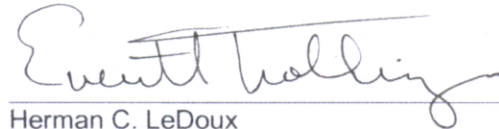
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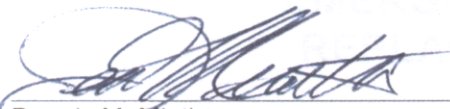
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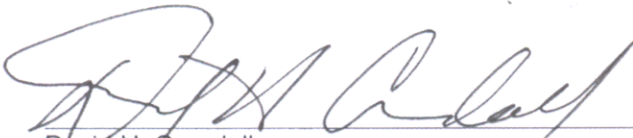
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Revision No: 1  
Revision Date: September 5, 2001  
Date: 9-7-01



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EMERGENCY OPERATIONS CENTER  
REPLACEMENT AND RELOCATION  
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Date: 10/2/01

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## Project Execution Plan Update/Revision Procedure

1. **Purpose:** This Project Execution Plan (PEP) documents the plan, means, methods, and controls that will be used to achieve the Emergency Operations Center (EOC) Replacement and Relocation Project objectives. The PEP has the following purposes:

- Describe the project.
- Describe the established project baselines.
- Document the plans, organization, structure, systems, and methodology that will be used to manage the project.
- Guide the technical, managerial, and administrative participants in the project.
- Establish change control thresholds.

This PEP is a living document and is required to be updated as often as necessary to ensure that the project and associated baselines, including the project organizational structure, procedures, systems, and methodologies remain current and accurate.

2. **Distribution and Revisions:** Once approved, a copy of this PEP will be distributed to each member and organization of the EOC project as shown in Figure 4-2. Controlled distribution of the PEP will be performed by the Los Alamos National Laboratory (LANL) Project Team Leader (PTL). The PEP is to be maintained in a three-ring binder to facilitate incorporation of changes and revisions. This PEP is to be reviewed at a minimum, annually and may be modified as often as required in accordance with the following procedures:

- a. The LANL PTL is responsible for initiating and coordinating reviews and updates to this PEP. In addition, the LANL PTL is responsible for ensuring that the final PEP changes are distributed to all EOC project team members/organizations that maintain controlled copies of the PEP. The LANL PTL will be responsible for maintaining a complete documented history of the PEP and any changes or modifications, to include reviews and review comments. Reviews and updates to the PEP must be coordinated with the signatory offices to this PEP as outlined in the following section, and may include some or all the following organizations:

- Keith R. Orr, Project Management Division, Project Team Leader/Construction Projects Manager, Cerro Grande Rehabilitation Project (CGRP)
- James L. Holt, NW-IFC: Infrastructure, Facilities, and Construction, Project Director, CGRP
- Herman C. LeDoux, National Nuclear Security Administration (NNSA)-LAAO, Federal Project Manager, CGRP
- Dennis M. Miotla, NNSA-HQ, Program Manager, CGRP
- David H. Crandall, NNSA-HQ, Acquisition Executive, CGRP

- b. Annual reviews of the PEP will be initiated in July of each year. In addition, major changes or baseline changes to the PEP, as identified below, may be initiated at any time as appropriate. Revisions and updates to this PEP will be incorporated into the appropriate PEP sections by the LANL PTL utilizing a redline/strikeout system. Deleted text will be highlighted with a strike out, and added text will be indicated utilizing the redline function. If there are changes to numerous pages, the PTL may choose to issue a complete revision to the PEP. The affected pages of the PEP will then be transmitted to some or all of the EOC team members identified in Figure 4-2, as appropriate, for review. Upon closure of the review process, the changes will be incorporated in the text of the PEP, and new pages with an alpha character suffix added to the original page number will be generated. As an example, several minor changes to Page 15 of the original PEP would be reflected in a final revised PEP Page 15-A. The revised PEP pages will be annotated with a footer indicating the Revision No. and date of the revision. A summary of the PEP revisions and changes will also be documented in the PEP Change Log located on page v of this document.

Revisions and updates to this PEP will be approved as identified for the three categories of changes discussed below. Approval cover sheets for each revision to the PEP will accompany the revision package. Once approved, copies of the approval cover sheets will accompany the final revision

package issued to the EOC project team members/organizations. These approval cover sheets will also be filed in the PEP with the PEP Change Log.

Revisions and updates to this PEP are classified into three categories with individual approval requirements, as follows.

1. Minor Administrative Changes: Minor changes such as administrative, organizational, grammatical errors, etc., may be identified by any member of the project team and brought to the attention of the LANL PTL. Approval of these changes requires approval from the PTL.
  2. Major Changes: For major changes to the PEP (not including project baseline changes), the LANL PTL will initiate a complete revised PEP for the review process rather than using the redline/strikeout system. Approval of these changes requires approval from the PTL, CGR Project Director, Federal Project Manager, Program Manager, and Acquisition Executive.
  3. Project Baseline Changes: For changes to the project associated with or driven by the Baseline Change Control Procedures, the affected portions of the PEP will be modified for the proposed changes and included with the Baseline Change Proposal (BCP). Upon disposition of the BCP, the appropriate changes to the PEP will be incorporated as required to reflect any changes to the project. Approval of these changes requires approval from the PTL, CGR Project Director, Federal Project Manager, Program Manager, and Acquisition Executive.
- c. The review process for updates/revisions to this PEP may be completed either through normal hard-copy/mail distribution or electronically via computer, at the discretion of the LANL PTL. In all cases, the most expeditious efficient method shall be selected.

**Project Execution Plan Change Log**

<b>Revision No.</b>	<b>Date</b>	<b>Change Description</b>	<b>Pages Changed</b>
0	06/21/01	Preliminary PEP.	
1	09/05/01	Complete revision.	All

## Acronyms and Abbreviations

AE	Acquisition Executive	G&A	General and Administrative
A/E	Architect/Engineer	GPG	Good Practice Guide
AL	Albuquerque Operations Office (DOE)	HQ	Headquarters (DOE)
BA	Actual Budget Authorized	ISSM	Integrated Safeguards and Security Management
BCP	Baseline Change Proposal	JCNM	Johnson Controls Northern New Mexico
BCCB	Baseline Change Control Board	LAAO	Los Alamos Area Office (NNSA)
BO	Budget Outlay	LAC	Los Alamos County
BOY	Beginning of Year	LANL	Los Alamos National Laboratory
BRASS	Basic Rapid Alarm Security System	LIP	Line Item Project
BRMD	Budget Resource Management Division	LIR	Laboratory Implementation Requirement
BUS	Business Operations Division	MCC	Multi-Channel Communications System
CA	Control Account	ML	Management Level
CD	Critical Decision	MOU	Memorandum of Understanding
CDR	Conceptual Design Report	NEPA	National Environmental Policy Act
CPDS	Construction Project Data Sheet	NNSA	National Nuclear Security Administration
CGR	Cerro Grande Rehabilitation Project	NW-IFC	Nuclear Weapons-Infrastructure, Facilities, and Construction
CGRP	Cerro Grande Rehabilitation Project	OMB	Office of Management and Budget
CMO	Construction Management Oversight	OPC	Other Project Cost
COMSEC	Communications Security	PC	Performance Category
D-B	Design-Build	PEP	Project Execution Plan
DNFSB	Defense Nuclear Facilities Safety Board	PHA	Preliminary Hazards Analysis
DOE	U.S. Department of Energy	Project ID	LANL Project Identification
DOE M	U.S. Department of Energy Manual	PSO	Program Secretarial Officer
DOE O	U.S. Department of Energy Order	PSWFASR	Partial Site-Wide Fire Alarm System Replacement
DOE STD	U.S. Department of Energy Standard	PTL	Project Team Leader
EA	Environmental Assessment	PM	Project Manager
EAC	Estimated Cost at Completion	PMD	Project Management Division
EOC	Emergency Operations Center	PQMP	Project Quality Management Plan
EM&R	Emergency Management and Response	PSD	Project Systems Description
EPC	Engineer/Procure/Construct	PTS	Protected Transmission System
ERO	Emergency Response Organization	QAP	Quality Assurance Plan
ESAAB	Energy Systems Acquisition Advisory Board	RFP	Request for Proposal
ESH	Environment, Safety, and Health	RFQ	Request for Qualification
FAR	Federal Acquisition Regulation	S Division	Security Division
FMIS	Financial Management Information System	SF	Square Footage
F&ORs	Functional and Operational Requirements	SME	Subject Matter Expert
FSS-6	Facilities, Security and Safeguards-Facilities Project Delivery Group	STC	Sound Transmission Class
FWO Division	Facility Waste Operations Division	TA	Technical Area
FY	Fiscal Year	TBD	To Be Determined
		TEC	Total Estimated Cost
		TPC	Total Project Cost
		TPL	Technical Project Leader
		UC	University of California
		WBS	Work Breakdown Structure

## 1. Introduction

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The purpose of the Emergency Operations Center Replacement and Relocation project (hereafter referred to as the Emergency Operations Center project), Los Alamos National Laboratory (LANL) Project ID No. 100143, is to design and construct a replacement Emergency Operations Center (EOC) at LANL. Response and recovery from the Cerro Grande Fire that burned through LANL and Los Alamos County (LAC) in May 2000 demonstrated the inadequacy of the existing EOC facility. The goal of this project is to provide a new state-of-the-art facility that consolidates the LANL Emergency Management and Response (EM&R) and LAC police, fire, and 911 dispatching activities into one primary location to enable the best possible response and management of anticipated emergencies.

This Project Execution Plan (PEP) has been prepared in accordance with US Department of Energy Order (DOE O) 413.3, *Program and Project Management for the Acquisition of Capital Assets*. The PEP is used to guide both project execution and project control, and has been prepared to support the request for Critical Decision (CD)-2/3 approval. This PEP has been tailored to meet the specific needs and complexities unique to this project. In accordance with DOE Manual (DOE M) 413.X, *Manual for Program and Project Management for the Planning, Programming, Budgeting, and Acquisition of Capital Assets*, information required in the PEP that exists in other project documents has been summarized and referenced.

## 2. Mission Need Justification

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The U.S. Department of Energy (DOE) is charged with maintaining the capability and capacity required to support the United States nuclear deterrent policy. LANL, as a Government Owned Contractor Operated entity, is required to provide the facilities necessary for safe, long term stewardship, and management of associated nuclear materials in a way that protects the public and worker health and safety, and the environment. This charter is especially true in an emergency event.

DOE O 151.1A, *Comprehensive Emergency Management Systems*, establishes requirements for a Comprehensive Emergency Management System containing an integrated departmental Emergency Response Organization (ERO). Worker safety and environmental concerns drive the base program established by DOE O 151.1A. These requirements mandate that the site or facility have the ability to properly notify, take protective actions, and maintain accountability of affected employees in the event of an emergency.

As a result of the Cerro Grande Fire a qualitative analysis determined the existing EOC was inadequate. In order to mitigate risk against future loss, replacement and relocation of the EOC is required. A more detailed discussion of the mission need can be found in the EOC *Mission Need Statement* (CGRP-0012-001, R0).

## 3. Project Description

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### 3.1. Project Overview

LANL will construct a new EOC at Technical Area 69 (TA-69). The new EOC will be designed as a state-of-the-art multi-use facility housing about 30 fulltime LANL staff and LAC (or their contractors) staff. The new EOC will house LANL and LAC personnel on a seven days per week, 24 hours per day basis. Under normal operating conditions, the facility will serve as the LAC fire, police, and 911-dispatch center and the administrative offices for the LANL EM&R staff. Up to about 120 LANL, Federal, State, Local, and Tribal representatives may be accommodated at the EOC in the event of an emergency on the general scale of the Cerro Grande Fire. The new EOC will be designed in accordance with DOE O 420.1, *Facility Safety* and its associated Guides and Standards to meet and withstand, to the extent practical, any anticipated emergency such that emergency response actions will not likely be compromised by the emergency itself. Such emergencies could include natural phenomena events in which occupants may be sustained for up to 14 days with filtered air and backup building services.



### 3.2. Technical and Functional Performance

The EOC project addresses comprehensive emergency management system deficiencies at LANL. The EOC project will provide:

- A modern, efficient, and accessible facility for the EOC staff and other agencies required to mitigate emergency situations.
- A facility that meets all current codes and standards for an emergency control center.
- A self-sustaining facility that can be occupied for long periods of time without inducing unnecessary stress on its occupants.
- A facility that is large enough to accommodate the emergency participants from neighboring jurisdictions such as other Federal, State, Tribal, and Community agencies involved in the emergency response.
- State-of-the-art equipment, software, and systems to allow the EOC staff to access necessary information, make informed decisions, and to accurately record those decisions.

A more detailed discussion of the technical and general functional requirements is described in the EOC *Program Requirements Document* (CGRP-0012-002, R0). The EOC *Functional and Operational Requirements* (CGRP-0012-003, R0) and the EOC *Design Criteria* (CGRP-0012-005, R0) provide specific technical and functional performance requirements.

#### Site Improvements

Improvements to land, which are part of the EOC Project include:

- State Road 501 will be used for access to the EOC. An existing abandoned road will be reconstructed to provide additional access to the EOC. The EOC drive will provide access to the fuel tank, emergency generator, and communications antenna.
- A 100 vehicle parking area will be constructed.
- Concrete walkways will be constructed.
- The EOC site will be enclosed with a standard 8-foot high property protection fence.
- The site will have low maintenance, native landscaping.
- Potable water will be obtained from the existing distribution system and a potable water storage tank will be constructed.
- A sanitary sewer forced main will be extended to the site and a lift station and overflow waste storage tank will be constructed.
- An elevated storage tank will be constructed on site to provide fire suppression water.
- Storm sewers are not required.
- Electrical power for the EOC will be from the existing 13.2 kV overhead distribution system.
- Telephone and communication utilities will be from the existing "S" site duct bank via newly constructed duct systems to the EOC.

#### Building Features

Salient features of the facility include:

- Foundations that are designed to conform to the recommendations of a Geotechnical investigation specific to the site.
- Superstructure construction to meet natural phenomenon, functional and operational requirements (F&ORs).
- Building services designed to meet the expected occupancy.

The new EOC will, to the extent practical, be furnished by relocating existing equipment from LANL and LAC facilities.

### 3.3. Environment Safety and Health

An Environment, Safety, and Health (ESH) plan has been prepared for this project in accordance with Project Management Division (PMD) Procedure 408, *Starting the ESH Process for Facilities, Security and Safeguards Division-Facilities Project Delivery (FSS-6) Projects* and PMD Procedure 404, *Preparing the ESH Plan and Safety Strategy*. The EOC project *ESH Plan and Safety Strategy* (CGRP-0012-006, R0)

identifies the ESH activities associated with the project. Because some preliminary safety related activity had already occurred to allow the ESH plan to be developed, there exists some accomplished work. The ESH plan gathers both the past and future activity to provide an integrated look at the expectations for the ESH aspects of the project.

A safety strategy has been prepared to summarize the project ESH approaches and deliverables. The safety strategy is based on and documented in the EOC *ESH Plan and Safety Strategy*. A brief summary of the safety strategy elements is presented below.

- **Facility Hazard Classification** – The new EOC has been classified as a low hazard facility. This classification is based primarily on standard industrial hazards routinely encountered and accepted by the public (Laboratory Implementation Requirement (LIR) 300-00-05.2, *Facility Hazard Classification*). The Facility Hazard Classification has been documented in the Preliminary Hazards Analysis (PHA).
- **Performance Category** – The new EOC has been designated as a performance category 2(PC-2) facility based on the hazard classification and the requirements of DOE Standard (DOE-STD)-1021-93, *Natural Phenomena Hazard Performance Categorization Guidelines for Structures, Systems, and Components*. This performance category will be updated if required as the design proceeds. The performance category has been documented in the PHA.
- **Preliminary Hazards Analysis** – A PHA has been prepared for this project. The purpose of this analysis is to identify the hazards associated with both normal and abnormal operations at the facility as well as to identify potential interface hazards associated with the EOC. The PHA contains or references the operation and design plans, identifies the systems that serve to promote safety, and provides commitments for achieving the safety objectives identified in the PHA. For more detailed information, see the EOC *Preliminary Hazards Analysis* (CGRP-0012-009, R0).

A more detailed discussion of the ESH approach and safety strategy is provided in the EOC project *ESH Plan and Safety Strategy*, (CGRP-0012-006, R0).

### 3.4. Security

#### Security Approach

As part of the CGR Project, the security approach for the EOC project follows the overall security approach established for the CGR Project. The *Cerro Grande Rehabilitation Project Integrated Safeguards and Security Management Plan* (CGRP-Plan-004, Rev. 0) provides details of the Integrated Safeguards and Security Management (ISSM) approach for all CGR Projects.

Based on “lessons learned” from several recent LANL projects, a security representative has been incorporated into the EOC project team. The security representative, or his delegate has worked closely with the EOC project team to determine specific security requirements for the different phases of the project. The following discussion summarizes the approach to be taken regarding security.

A project-specific security plan is not required until the design-build (D-B) contract is awarded. The D-B contractor may need a facility plan to operate. A construction security plan will not be required until security systems are introduced into the construction site. If a security area is penetrated as part of the project, security measures must be implemented, such as escorts for uncleared workers and physical security support if a security fence line is temporarily taken down. A facility security plan will be developed once the Laboratory takes ownership of the building.

During the actual facility design work, LANL will provide the security system locations. This activity will be identified as a project hold point. The D-B contractor will install conduit and boxes, and LANL will install the alarm system and access control.

Acceptance criteria will be based on compliance with DOE Directives, the Site/Project Tempest Plan to be developed by LANL, the Site Communications Security (COMSEC) Plan (if required), and the Protection Transmission System (PTS) Plan to be developed by LANL (if required). Construction verification of design drawings and a security compliance inspection, including photographs taken by LANL, will be required. Specific requirements will be identified during the final design, prior to construction. At a minimum, LANL will need to inspect and photograph the concrete pour for the vault, security system

conduit runs, PTS (if installed behind sheetrock), and all rebar/barriers for penetrations. Sound Transmission Class (STC) 50 windows, doors, walls, and/or ceiling will need to be inspected and photographed. These will also be identified as hold points.

## Security Design

The security representative, or his delegate, for this project has been involved in the reviews of all design documents. The following discussion provides information regarding technical and physical security at the EOC based on discussions with and review comments provided by the security representative.

Security will be provided at the new EOC in order to limit facility access to authorized personnel, maintain property protection, and protect the classified vault. The facility will be surrounded by a perimeter fence that will encompass all facility buildings, structures, and parking lots. Access for vehicles and personnel will be through gates actuated by access control hardware or remotely controlled from the Administrative Area or the Dispatch Center. The perimeter of the facility and the parking areas will have security lighting.

Building access will be controlled with access control hardware at the main entry doors. All personnel traffic will flow past a main administrative reception area where personnel and visitors can be processed as necessary.

Interior spaces of the EOC are divided into three major security areas:

1. LANL spaces (This is the majority of the building including the EOC itself, EOC support spaces, staff offices, communications electrical and mechanical rooms, and the classified vault).
2. LAC Spaces (This is primarily the Dispatch Center and its associated spaces).
3. Common or shared spaces (This includes toilets, break room, storage, etc).

The LANL spaces will be configured so that access into these spaces can be controlled as necessary and limited to personnel with the proper access authorization. The classified vault area will be constructed and controlled to meet DOE security requirements for a vault. The vault is essentially a security island within the LANL space.

The LAC spaces will also be configured so that access into these spaces can be controlled as necessary and limited to personnel with the proper access authorization. Once inside the EOC main entrance, access to the common or shared spaces will require, at most, key access through a locked door, but many of these spaces will be open access. Entering the LANL or LAC spaces from the common areas will require passage through an access control device.

This facility will eventually be connected to the Argus Security System. It is unclear at this time whether the Argus System will be ready to accept the EOC connection when the EOC construction is substantially complete. If the EOC cannot be initially connected to Argus, a stand-alone system will be installed, and the classified vault will be connected to the existing LANL Basic Rapid Alarm Security System (BRASS). In any case, Argus compatible raceways and cabling will be specified and installed.

## 3.5. Relationship to Other Projects

This project is part of the overall Cerro Grande Rehabilitation (CGR) Project established to upgrade specific facility and systems infrastructure to restore operability and reliability of the TAs, facilities, and capabilities lost as a result of the Cerro Grande Fire. The EOC project is directly related to two other CGR Project subprojects. The primary interface is with the Partial Site-Wide Fire Alarm System Replacement (PSWFASR) project. A joint LAC police, fire, and 911-dispatch area will be located in the EOC. To support that effort, replacement of the existing LANL fire alarm system and tie-in to the head end equipment in the new EOC will be provided by the PSWFASR project.

There will be space provided in the EOC for the new multi-band radio system as well as communications conduits to receive various forms of data that will be provided as part of the Multi-Channel Communications System (MCC) project. The EOC project will provide the space and communications conduits, while the MCC project will provide the physical radio and data management

equipment/integration to all communication devices that are MCC-specific. All other CGR Project data inputs such as drone and helicopter surveillance will be coordinated through the MCC project.

## 4. Project Management Approach

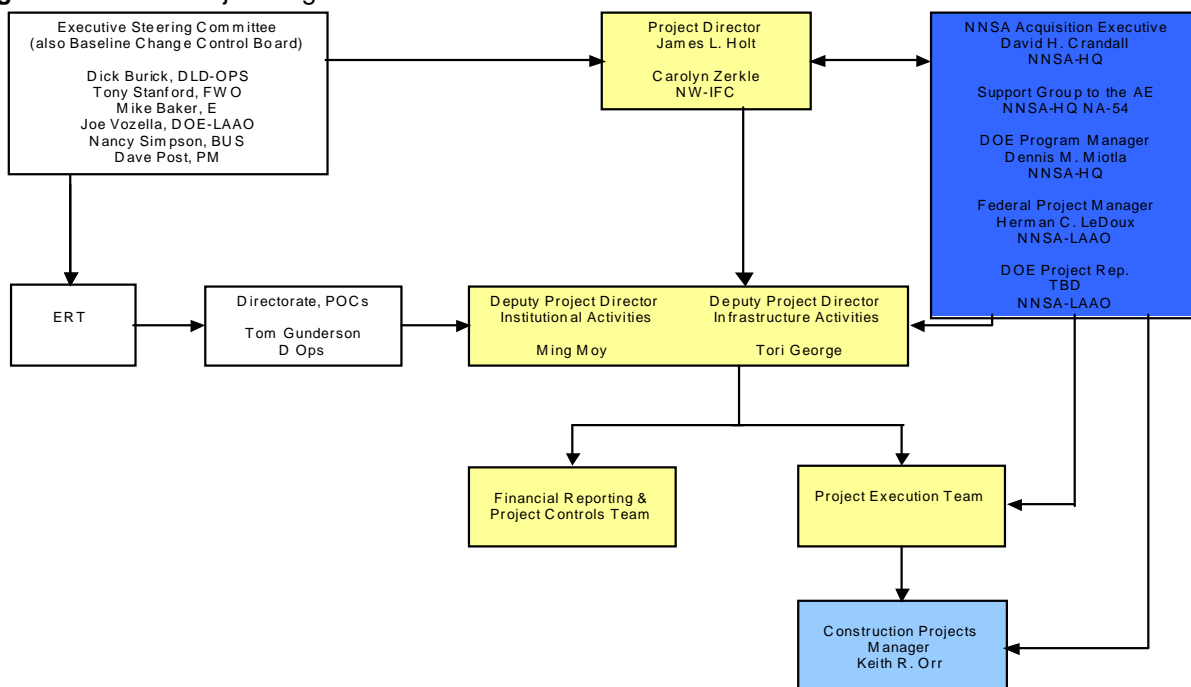
### 4.1. General

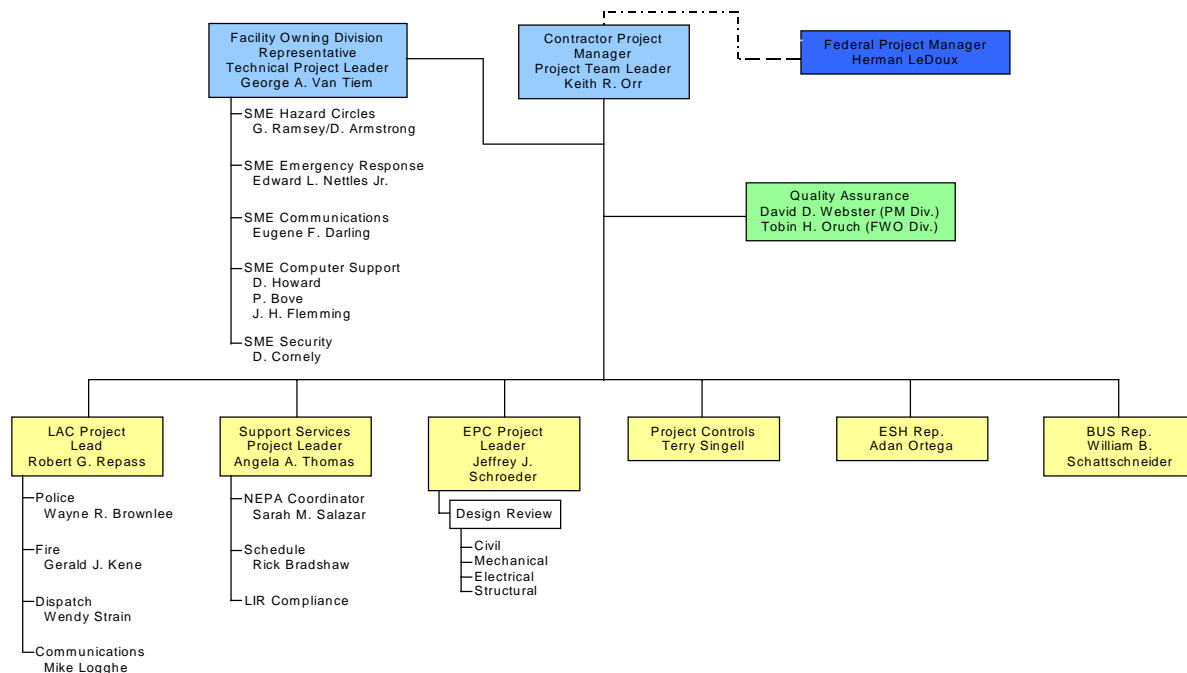
The EOC project is a congressionally approved Line Item project being executed as a part of the CGR Project. The CGR Project was formed to address near-term and long-term activities required for LANL to fully recover from the Cerro Grande Fire. The leadership of the CGR Project will be provided by the Program Director or designee from the Nuclear Weapons-Infrastructure, Facilities, and Construction (NW-IFC) Program Office with oversight from an Executive Steering Committee. As part of the CGR Project, the project management approach for the EOC project follows the overall project management approach established for the CGR Project. The *Cerro Grande Rehabilitation Project Execution Plan* (CGR-Plan 001 Rev.0) provides greater detail about interface management control techniques that will be utilized and procedures for resolving conflicts between responsible organizations. It also identifies specific management tools to support management in planning and controlling the project.

DOE National Nuclear Security Administration (NNSA) has assigned an Acquisition Executive (AE), NNSA Headquarters (HQ), David H. Crandall; Program Manager, NNSA HQ, Dennis Miotla; and a Federal Project Manager (FPM), NNSA-Los Alamos Area Office (LAAO), Herman LeDoux. They will maintain close communications and coordination with the LANL project team to provide the support, guidance, and approval required to assure success of the project. Figure 4-1 provides a graphical representation of the CGR Project organization.

The EOC project is one of thirty subprojects making up the CGR Project. Successful completion of the EOC project requires a team effort with clear definition of roles, responsibilities, interfaces, and open communication among all participants. This is especially true considering the critical nature, magnitude, and speed of execution of this project. The day-to-day leadership of the EOC project will be provided by the LANL EOC Project Team Leader (PTL). He will have a full time, dedicated team of professionals to manage all aspects of the project. The project team will also include representation from NNSA. Professional construction management subcontractors will be used to augment this team. A number of the organizational attributes of this team are the result of incorporating lessons learned from successful and failed projects from within the NNSA weapons complex. Figure 4-2 is a graphical representation of the EOC project team.

**Figure 4-1: CGR Project Organization**



**Figure 4-2: EOC Project Team**

## 4.2. CGR Project Organization

This section provides descriptions of each of the key CGR Project NNSA and CGR Project LANL positions and their responsibilities specifically related to the EOC project. The roles and responsibilities of CGR Project team members pertaining to the CGR Project as a whole are described in the *Cerro Grande Rehabilitation Project Execution Plan*.

### National Nuclear Security Administration Headquarters

**Acquisition Executive:** The NNSA Acquisition Executive is responsible for the success of the EOC project as the responsible and accountable officer. The EOC project-related responsibilities of the NNSA Acquisition Executive include the following:

- Approve the Critical Decisions.
- Establish and serve as the chairperson of the EOC project Level 1 Baseline Change Control Board (BCCB) to coordinate the NNSA-HQ review, assessment, and action on all proposed baseline changes that are at the EOC project Level 1 approval threshold or decision points and oversee all congressional notification requirements.
- Approve selection of the Federal Project Manager.

**Program Manager:** The NNSA Program Manager, with a small-dedicated project staff and matrix support from within Defense Programs and Department of Energy Field Elements, is responsible and accountable for overall effective management and execution of the EOC project. The EOC project-related responsibilities of the NNSA Program Manager include the following:

- Provide oversight of project policy through the EOC PEP and formal project direction.
- Maintain overview of project cost, schedule, and technical performance via the reporting system, project status review meetings, and regular communications with the Federal Project Manager and LANL CGR Project Director.
- Coordinate the NNSA DP Energy Systems Acquisition Advisory Board (ESAAB)-Equivalent.
- Periodically visit the site and attend project meetings.
- Coordinate monthly reviews and preparation of executive reports for Defense Programs (DP) DP-1.
- Act as interface to Office of Engineering and Construction Management (CR-80).

**Project Management Support Office:** The EOC project-related responsibilities of the NNSA Acquisition Executive include the following:

- Provides independent oversight and reports directly to the AE.
- Serves as the Secretariat for the ESAAB-equivalent function.
- Coordinates quarterly project performance reviews.

### **National Nuclear Security Administration Los Alamos Area Office**

**Federal Project Manager, NNSA-LAAO:** The Federal Project Manager (FPM) is responsible for the NNSA project-related onsite management and field actions. This person is the single NNSA point of contact for the project. No NNSA direction should go to the LANL EOC project team without the knowledge and consent of the FPM. Consistent with the formal project direction and funding authorization provided by NNSA-HQ, the FPM responsibilities include the following:

- Provide overall formal project and technical guidance.
- Provide NNSA project management, including monitoring of all aspects of the project phases relative to the scope, cost, and schedule baselines, and ensure adequacy of the project management system.
- Establish and serve as the chairperson for the EOC project Level 2 BCCB, establish the BCCB membership to coordinate the NNSA Field review, assessment, and action on all proposed baseline changes that are within the EOC project Level 2 approval thresholds, and transmit all proposed baseline changes that exceed the EOC project Level 2 approval thresholds with recommendations to the EOC project Level 1 BCCB.
- Coordinate with NNSA Field matrix organizations, as required, to obtain support of project management activities, including the review and concurrence of NNSA-required safety and environmental documents.
- Function as the formal communications channel between NNSA and the LANL EOC project management team. Interface with NNSA-Albuquerque (AL)-Budget Resource Management Division (BRMD). Approve the release of funding from NNSA-AL to LANL.
- Provide direct involvement with the community and stakeholders concerning the Project's mission and issues of operational performance.
- Oversee formal project monthly reviews.

### **CGR Project Director/Program Office**

The CGR Project Director has the overall contractor authority and responsibility for the project's execution, overall technical direction, and allocation of funds. The CGR Project Director fills the key role for the physical realization of the facility, and has responsibility for implementing all plans for achieving the project activities. Responsibilities include the following:

- Monitor progress and effect necessary corrective actions, where required, to resolve problems and conflicts that affect project implementation.
- Control the EOC project configuration.
- Participate in the EOC project Level 2 BCCB to coordinate the Laboratory review, assessment, and action on all proposed changes.
- Participate as a member of the EOC project Level 2 BCCB as the recording secretary.

### **CGR Deputy Project Directors**

CGR Deputy Project Directors are responsible for execution of the Project within scope, cost, and schedule baselines. Responsibilities include the following:

- Monthly briefings to NNSA-Headquarters.
- Interface as needed with the NNSA Federal Project Manager.
- Make presentations regarding the project when necessary.
- Create and disseminate monthly project reports and maintain performance metrics using the Earned Value Method.

### 4.3. EOC Project Team

This section defines the key construction project management roles and responsibilities that shall be followed at LANL for the EOC project. The Team Appointment Letter for the EOC Project identifies the individuals appointed to the EOC project team. The EOC Roles and Responsibilities matrix identifies specific tasks assigned to the EOC project team members. This matrix was distributed to the EOC project team members on May 2, 2001 and will be revisited and revised at each phase of the project, as needed.

Contractor Project Manager: The Contractor (LANL) Project Manager manages the day-to-day execution of assigned projects in a cost-effective manner, in accordance with requirements, procedures, and standards, as set forth in the contract. The LANL Project Manager executes projects within approved cost, schedule, and scope baselines, as defined in the PEP, as set forth in the contract.

Project Team Leader: The LANL EOC Project Team Leader (PTL) has the overall contractor authority and responsibility for the project's execution, overall technical direction, and allocation of funds. The EOC PTL fills the key role for the physical realization of the facility, and has responsibility for implementing all plans for achieving the project activities. Responsibilities include the following:

- Review, and concur or approve submittals.
- Integrate planning, performance tracking, and reporting to ensure adequate control of all participants' activity.
- Execute the project and ensuring that activities are properly defined and controlled. Monitor progress and effect necessary corrective actions, where required, to resolve problems and conflicts that affect project implementation.
- Interface as needed with the Federal Project Manager.
- Establish and maintain baselines (technical, cost, and schedule) in accordance with the PEP and report their status to the NNSA.
- Provide for the contracting, management, and technical direction of the Architect/Engineer (A/E), Engineering Support Contractors, Design-Build Contractor, and other contractors/vendors.
- Conduct project work in accordance with the applicable DOE Orders, institutional standards, requirements, and procedures.
- Implement DOE assurance requirements for environment, safety and health; quality assurance; and security.
- Prepare all reports and documentation for approval of Critical Decisions (CDs), Validations, and other approvals as needed to execute the project.
- Make presentations regarding the project when necessary.
- Create and disseminate monthly project reports and maintain performance metrics using the Earned Value Method to DOE directors for inclusion in the overall CGR Project monthly report.
- Ensure that all commissioning, acceptance, and occupancy requirements are met prior to occupant move-in.
- Manage contingency to ensure that an adequate level is maintained throughout the project life.
- Complete the final cost report and ensure that as-built drawings are complete.
- Establish and serve as the chairperson for the EOC project Level 3 BCCB and transmit all proposed baseline changes that exceed the EOC project Level 3 approval thresholds with recommendations to the EOC project Level 2 BCCB.

For the EOC project, the EOC Project Team Leader is also the EOC Contractor Project Manager and the CGR Project Construction Projects Manager.

Technical Project Leader: The Technical Project Leader (TPL) shall provide the technical leadership required regarding emergency management and response activities. The TPL will be responsible for providing technical direction in the development of execution of the project.

Facility Owning Division Representative: The Facility Owning Division Representative has a primary role to insure the needs and operational requirements of the users are met. For the EOC project, the Technical Project Leader and the Facility Owning Division Representative is the same individual.

Engineer/Procure/Construct (EPC) Project Leader: The EPC Project Leader responsibilities include the following:

- Coordinate subcontract procurement and conceptual design reviews by LANL Subject Matter Experts.
- Coordinate, prepare, and review EOC project documents.
- Provide construction safety support to the technical user overview.
- Coordinate inspection and facilities engineering activities.
- Provide construction management oversight.

Support Services Project Leader: The Support Services Project Leader responsibilities include the following:

- Coordinate and provide technical support for ESH and NEPA activities.
- Coordinate, prepare, and review EOC project documents.
- Ensure compliance with Laboratory Implementation Requirements and EOC project procedures.
- Coordinate project schedule preparation and provide input as necessary to maintain the schedule.

Environmental, Safety, and Health (ESH) Representative: ESH shall support the project by developing and evaluating project documentation to ensure incorporation and implementation of all applicable requirements pertaining to ESH issues.

Business Operations Division (BUS): The BUS representative shall provide contracting, contract management, and financial and property management support to the project through the assigned project representative.

Project Controls: Project Controls responsibilities include the following:

- Prepare routine and special project management reports.
- Maintain contingency use logs.
- Prepare authorization documentation supporting the invoicing process, as required by BUS-5 and others.
- Coordinate the change control function for the EOC PTL.

Shared Responsibilities: All EOC Project Team members share the responsibilities listed below. During the planning phase:

- Provide input for the PEP by identifying work, specifying performance objectives, estimating costs and schedules, and identifying interfaces.
- Help develop, review, and approve the PEP during the implementation phase.
- Promote teamwork and a safe work environment.
- Attend or send delegates to attend project meetings.
- Evaluate technical progress at project meetings.
- Provide peer review.

#### **4.4. Other Organizations**

Design-Build Consultant (D-B Consultant, Holmes and Narver/Raytheon): The D-B Consultant, during the design-build RFP documentation development, will be responsible for the following:

- EOC *Project Systems Description* (CGRP-0012-013, R0).
- EOC *Functional and Operational Requirements* (CGRP-0012-003, R0).
- EOC *Design Criteria* (CGRP-0012-005, R0).
- EOC *Design-Build Specifications*, (CGRP-0012-012, R0).
- All supporting activities including site verification data, performance specifications, fire hazard analysis, incorporation of LANL EOC-specific seismic evaluation and criteria, security analysis, cost estimating, and scheduling.
- Conduct technical evaluation of D-B proposals and designs to ensure performance with Project System Descriptions, F&ORs, Design Criteria, and D-B Performance Specifications.

Design-Build Contractor (D-B Contractor, The Austin Company): The D-B Contractor and their subcontractors are responsible for the design and construction of the facility and utilities in accordance with the terms and conditions of the D-B contract documents.



Support Services Subcontractor: Johnson Controls Northern New Mexico (JCNNM), the support services subcontractor, will make all connections to existing utility systems and make any required modifications to other operating systems.

Construction Management Oversight Contractor (To be determined): The Construction Management Oversight Contractor is responsible for providing construction management services to oversee the design and construction of the EOC in accordance with the terms and conditions of the construction management oversight contract documents.

#### **4.5. Project Management Division Procedures**

The following list identifies the Project Management Division (PMD) procedures that have been identified for planning and execution of the EOC project. The list is currently under development and review by the EOC project team.

- PMD Procedure 102, Rev. 3 – Request for Project Authorization
- PMD Procedure 104, Rev. 1 – Risk Assessment and Management
- PMD Procedure 107, Rev. 1 – Configuration Change Control
- PMD Procedure 109, Rev. 3 – Project Controls
- PMD Procedure 113, Rev. 1 – Assessments
- PMD Procedure 114, Rev. 0 – Lessons Learned
- PMD Procedure 201, Rev. 3 – Procedure Development, Revision, and Implementation
- PMD Procedure 204, Rev. 2 – Personnel Qualification
- PMD Procedure 206, Rev. 2 – Document Control
- PMD Procedure 207, Rev. 3 – Project Records Management
- PMD Procedure 302, Rev. 1 – Statement of Work
- PMD Procedure 308, Rev. 3 – Design Review
- PMD Procedure 313, Rev. 1 – Nonconformance Reporting
- PMD Procedure 401, Rev. 1 – ESH-Identification Process
- PMD Procedure 404, Rev. 1 – Preparing the Project ESH Plan and Safety Strategy
- PMD Procedure 408, Rev. 0 – Starting the ESH Process
- PMD Procedure 504, Rev. 0 – Supplier Evaluation and Qualification
- PMD Procedure 602, Rev. 0 – Constructability Review
- PMD Procedure 603, Rev. 0 – Construction Planning and Scheduling
- PMD Procedure 604, Rev. 0 – Construction Safety
- PMD Procedure 605, Rev. 1 – Contract Administration
- PMD Procedure 606, Rev. 1 – Project Acceptance and Closeout
- PMD Procedure 703, Rev. 0 – Acceptance Inspection and Testing

Procedure Implementation Agreements are being prepared for each procedure to identify modifications to the procedures, such as updating outdated references, and applicability to the EOC project. The list of procedures and copies of the Procedure Implementation Agreements will be transmitted to the EOC project team as necessary.

#### **5. Work Breakdown Structure**

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This Work Breakdown Structure (WBS) was developed in a manner to support the direct management of work as it has been assigned to the key personnel. WBS Level 1 is the entire EOC project; containing both the capital and expense funded work elements. Level 2 divides the work by whether it is capital or expense funded. Level 3 is used to define the work elements by single points of accountability. WBS dictionaries are included in Attachment 1. In addition to this WBS, the Prism™ and Primavera Project Planner™ software have conversion tables that allow for the lowest elements of the WBS to be rolled up in a manner that is required to report in the standard NNSA Construction Project Data Sheet (CPDS), Office of Management and Budget (OMB) Circular A-11, *Preparation and Submission of Budget Estimates*, and other required government formats. Figure 5-1 below summarizes the WBS for the EOC project. Figure 5-2 provides a graphical representation of the WBS to Level 3.

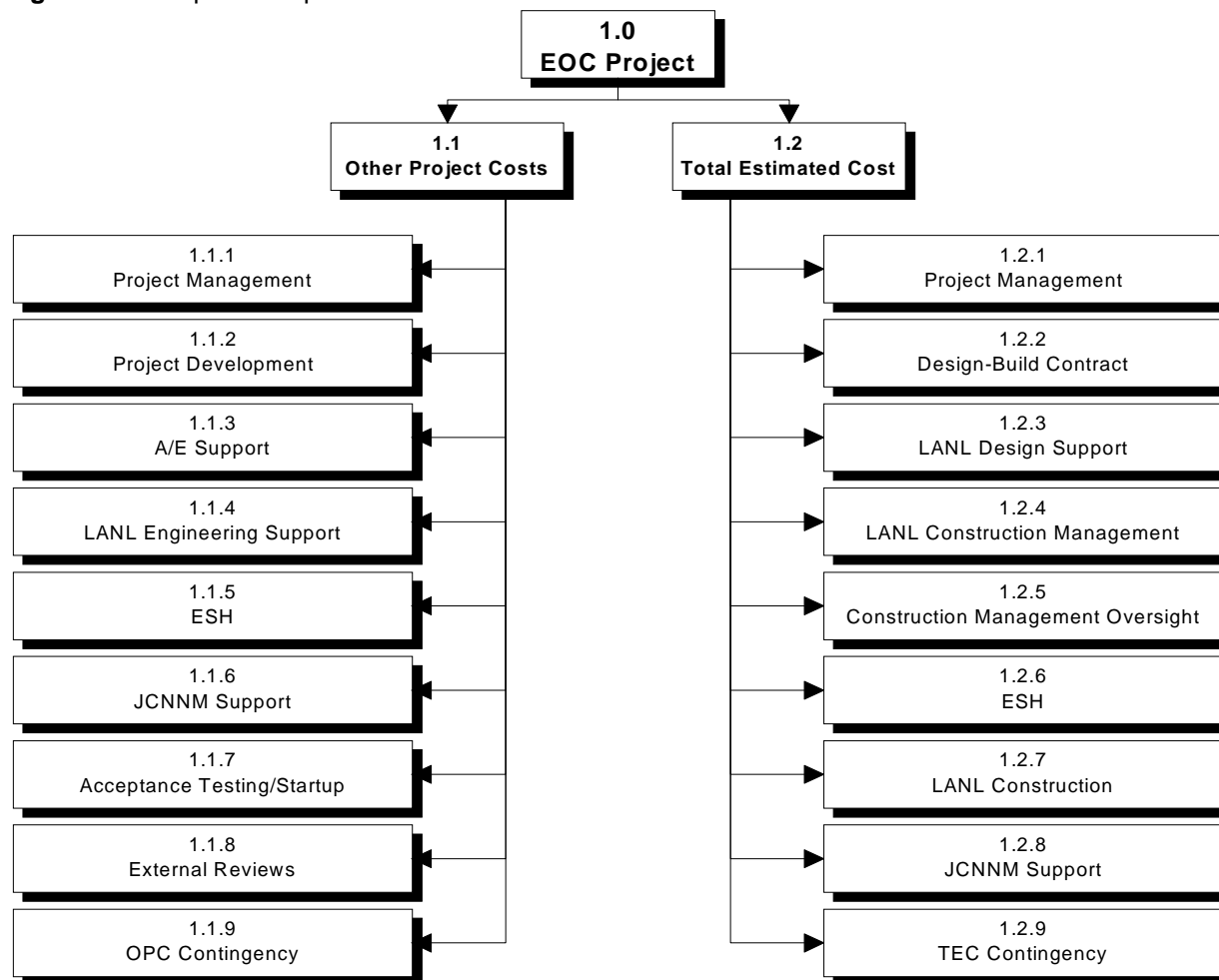
To assure accurate accounting and cost analysis of incurred costs, each Level 4 WBS will be assigned a unique identification number in the LANL Financial Management Information System (FMIS). This number

will include the Program Code, Cost Account, and a Work Package number. The data from FMIS interfaces with the LANL project controls systems. The Level 4 WBS cost can be rolled up to the Level 3 WBS for reporting purposes, which can then be rolled up to the Level 2 WBS.

**Figure 5-1: Work Breakdown Structure to Level 3**

<b>1.0 EOC Project</b>	<b>\$ 21,489,970</b>
<b>1.1 Other Project Costs (OPC)</b>	<b>\$ 1,534,419</b>
1.1.1 Project Management	\$ 83,222
1.1.2 Project Development	\$ 323,178
1.1.3 A/E Support	\$ 782,032
1.1.4 LANL Engineering Support	\$ 40,844
1.1.5 ESH	\$ 244,422
1.1.6 JCNNM Support	\$ 11,892
1.1.7 Acceptance Testing/Startup	\$ 40,554
1.1.8 External Reviews	\$ 8,275
1.1.9 OPC Contingency	(Included in CGR Task # 0102)
<b>1.2 Total Estimated Cost (TEC)</b>	<b>\$ 19,955,551</b>
1.2.1 Project Management	\$ 578,824
1.2.2 Design-Build Contract	\$ 15,124,806
1.2.3 LANL Design Support	\$ 159,794
1.2.4 LANL Construction Management	\$ 55,594
1.2.5 Construction Management Oversight	\$ 447,101
1.2.6 ESH	\$ 19,591
1.2.7 LANL Construction	\$ 1,215,552
1.2.8 JCNNM Support	\$ 115,000
1.2.9 TEC Contingency	\$ 2,239,289

**Figure 5-2: Graphical Representation of Work Breakdown Structure to Level 3.**



## 6. Resource Plan

The following resource plan provides a short description of funding and expenditure plans for the EOC project.

### 6.1. Funding Profile

The EOC project Total Estimated Cost (TEC) funding profile is presented in Table 6-1. The EOC project differs from standard Line Item Projects in that all TEC funding for the EOC project was received in FY01.

**Table 6-1: TEC Funding Profile**

(Dollars in Thousands)

Fiscal Year	Estimated Budget Authorized	Actual Budget Authorized (BA)	Budget Outlay (BO)	Costs	Beginning of Year (BOY)
2001	\$20,000	\$19,956 <sup>a</sup>	\$19,956	\$0	\$19,956
2002	-	-	\$19,956	\$9,369	\$10,587
2003	-	-	\$10,587	\$8,999	\$1,588
2004	-	-	\$1,588	\$1,588	\$0

<sup>a</sup> Original appropriation was \$20,000,000. This was reduced by \$44,000 for a rescission enacted by Section 1403 of the FY 2001 Consolidated Appropriations Act. All funding was received at the beginning of this project. Therefore, the actual budget authorized for FY 2001 is equal to the total appropriation for this project.

### 6.2. Budget by Funding Category

The spending profile summarized in Table 6-2 is based on the cost estimate provided by the selected D-B contractor, as well as actual and estimated LANL costs. The budgeted TEC is equal to the TEC authorized in the FY 2001 Energy and Water Development Appropriations Act. However, based on the D-B contractor cost estimate and updated LANL costs, the TEC costs for each year differ somewhat from what was originally estimated.

**Table 6-2: Budget by Funding Category**

(Dollars in Thousands)

	FY 2001	FY 2002	FY 2003	FY 2004	Total
<b>Total Estimated Costs</b>					
Design	\$0	\$1,060	\$0	\$0	\$1,060
Construction	\$0	\$8,309	\$8,999	\$1,588	\$18,896
<b>Total Estimated Costs (TEC)</b>	<b>\$0</b>	<b>\$9,369</b>	<b>\$8,999</b>	<b>\$1,588</b>	<b>\$19,956</b>
<b>Other Project Costs</b>					
Conceptual Design	\$1,260	\$0	\$0	\$0	\$1,260
NEPA Documentation	\$168	\$0	\$0	\$0	\$168
Other Project-Related Costs	\$77	\$0	\$30	\$0	\$107
<b>Other Project Cost (OPC)</b>	<b>\$1,505</b>	<b>\$0</b>	<b>\$30</b>	<b>\$0</b>	<b>\$1,535</b>
<b>Total Project Cost (TPC)</b>	<b>\$1,505</b>	<b>\$9,369</b>	<b>\$9,029</b>	<b>\$1,588</b>	<b>\$21,491</b>

### 6.3. Total Project Life-Cycle Cost Plan

The total project life cycle cost plan presented in Table 6-3 is based on the life cycle cost analysis completed as part of the CDR.

**Table 6-3: Life Cycle Cost Plan by Fiscal Year**  
(FY 2001 Dollars in Thousands)

Life-Cycle Cost item	Total Cost in FY 2001
Utilities	\$ 115,776
Preventive Maintenance	\$ 57,888
Grounds Maintenance	\$ 21,708
Janitorial Services	\$ 50,652
<b>TOTAL ANNUAL COSTS</b>	<b>\$ 246,024</b>

## 7. Project Baselines

A project baseline contains three elements: (1) the technical baseline, (2) the schedule baseline, and (3) the cost baseline. The technical baseline is developed first and describes the desired configuration, performance, and characteristics of the end product. The scope of work necessary to provide the end product is determined using the technical baseline. The scope of work is divided into elements that become the WBS, and is the basis for the schedule and cost baselines.

The following text presents the key bounding project assumptions for this project. These assumptions will be verified and as necessary, updated during the development of the project.

### Technical Assumptions

- The project does not require unusual security restrictions during the planning, or design. Some features of the EOC may be subject to classification restrictions during construction.
- The Management Level (ML) for this project has been determined to be ML 3 (except for the vault, which will be an ML 2).
- The project shall be managed in accordance with LIR 220-01-01.4, *Construction Project Management Laboratory Implementation Requirements Document*.
- The conceptual efforts will include related fieldwork to adequately develop the conceptual design elements of this project. Fieldwork will include such activities as characterization of existing soils and site surveys.
- An Environmental Assessment (EA) was required for this project. The final EA has been completed and a Finding of No Significant Impact was issued. It is assumed that there are no remaining NEPA issues associated with the project scope and current building location.

### Cost Assumptions

- This project is anticipated to include expense and capital funding. Expense funding for conceptual design and start up efforts and capital funding for definitive design and construction.
- Other project costs including conceptual design cost for the EOC shall not exceed \$1.535 Million.
- General and Administrative (G&A) will be applied only to B line labor (LANL direct charges) at a rate based on the funding determination for this project. Materials, JCNNM, and recharge labor are exempt from G&A.
- Group tax will only be applied to B line labor at the rate of the Group of the employee.
- Division tax will only be applied to B line labor at the rate of the Division of the employee; employees must charge to their line management Division.
- Procurement tax will be applied on all procurements.
- As the FY02, FY03, and FY04 burden structure (G&A, and Group and Division taxes) has not been finalized at the time of this writing, burdens will be assumed to be similar to those in FY01.
- LANL labor costs are determined in part by DOE-approved LANL accounting practices. A change in the accounting practices could affect the cost of the work performed.
- Costs associated with any programmatic delays resulting from any work on the EOC project are not included (i.e. building residents who are not assigned to this project will not charge the project for delays which may result from project activities).
- Lost time due to labor disputes, safety, unusual weather conditions, or security-related conditions have not been included.

## 7.1. Technical Baseline

The scope (technical) baseline has been established from which work can be accomplished and performance can be measured. This baseline has been developed based on the EOC project's established mission need, technical objectives, and functional requirements. As specified in DOE O 413.3, the specifics of the technical baseline are documented formally in the EOC *Conceptual Design Report*, (CGRP-0012-008, R0).

## 7.2. Schedule Baseline

The schedule baseline has been developed to be consistent with the WBS and integrated with the cost estimate, and represents all project work scope. Activity logic was developed to depict all work scope, constraints, and decision points. Figures 7-1 and 7-2 present the summary and detailed schedules (respectively) for completing the proposed scope of work. All conceptual design work was completed in June 2001. This aggressive schedule was intended to allow sufficient time to "start design" in FY02 following authorization. The information provided reflects schedule information provided in the selected proposal for the design-build contract.

Figure 7-1: WBS Level 3 Summary Project Schedule

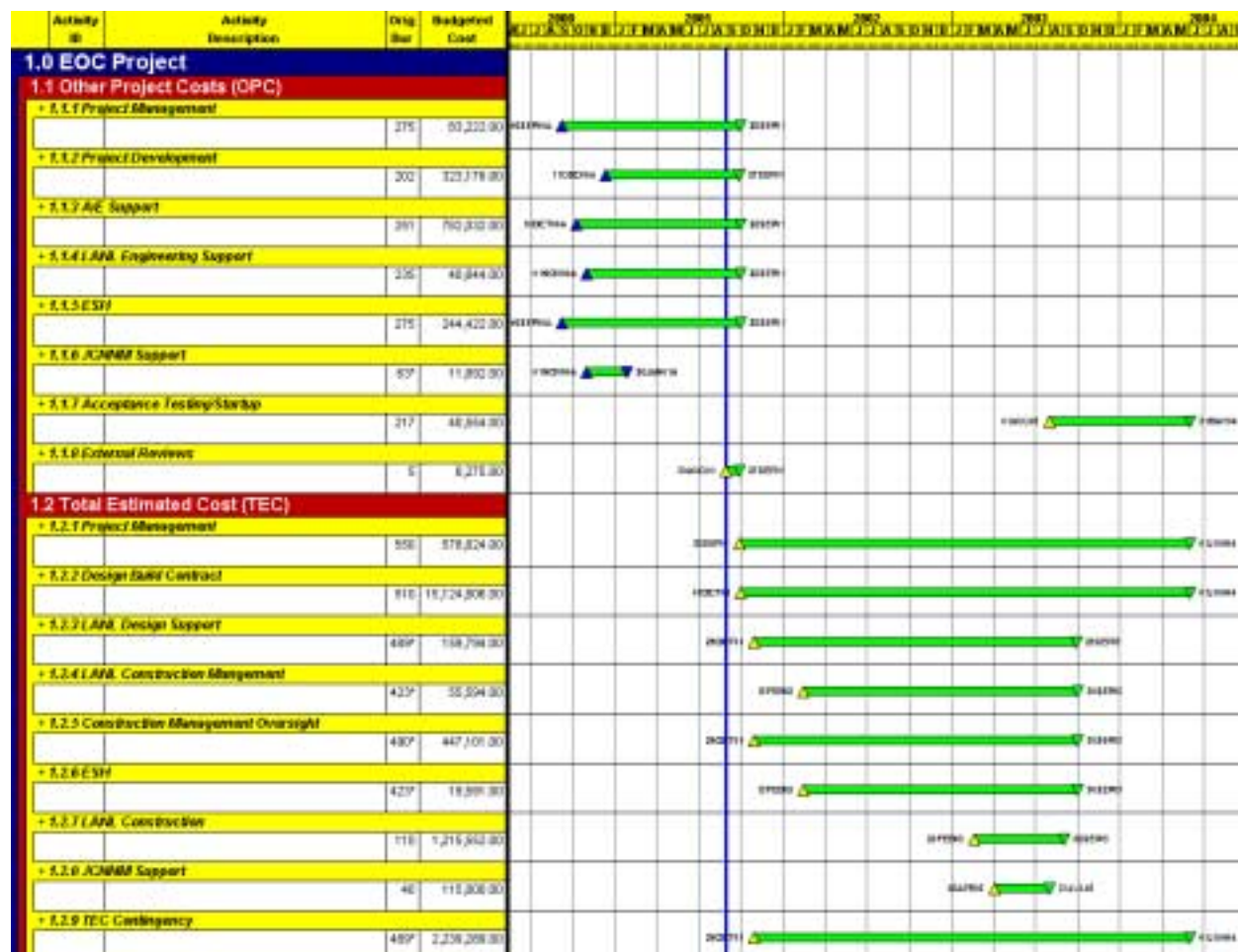
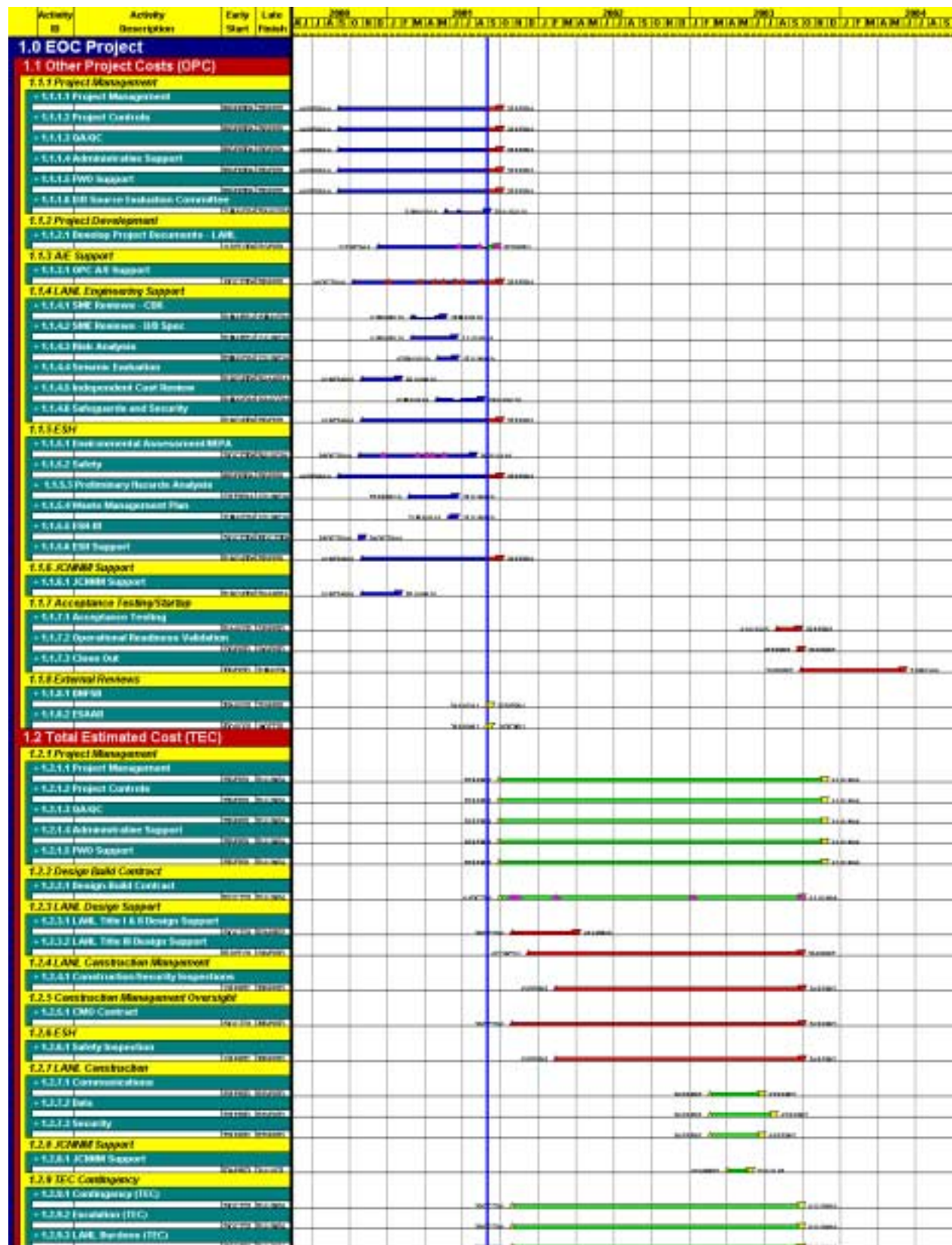


Figure 7-2: WBS Level 4 Detailed Project Schedule



### 7.3. Major Events

Table 7-1 lists the major events or major milestones of the EOC project. The information provided reflects schedule information provided in the selected proposal for the design-build contract. Actual completion dates will be added to this list during annual revisions.

**Table 7-1: Major Milestones for the EOC Project**

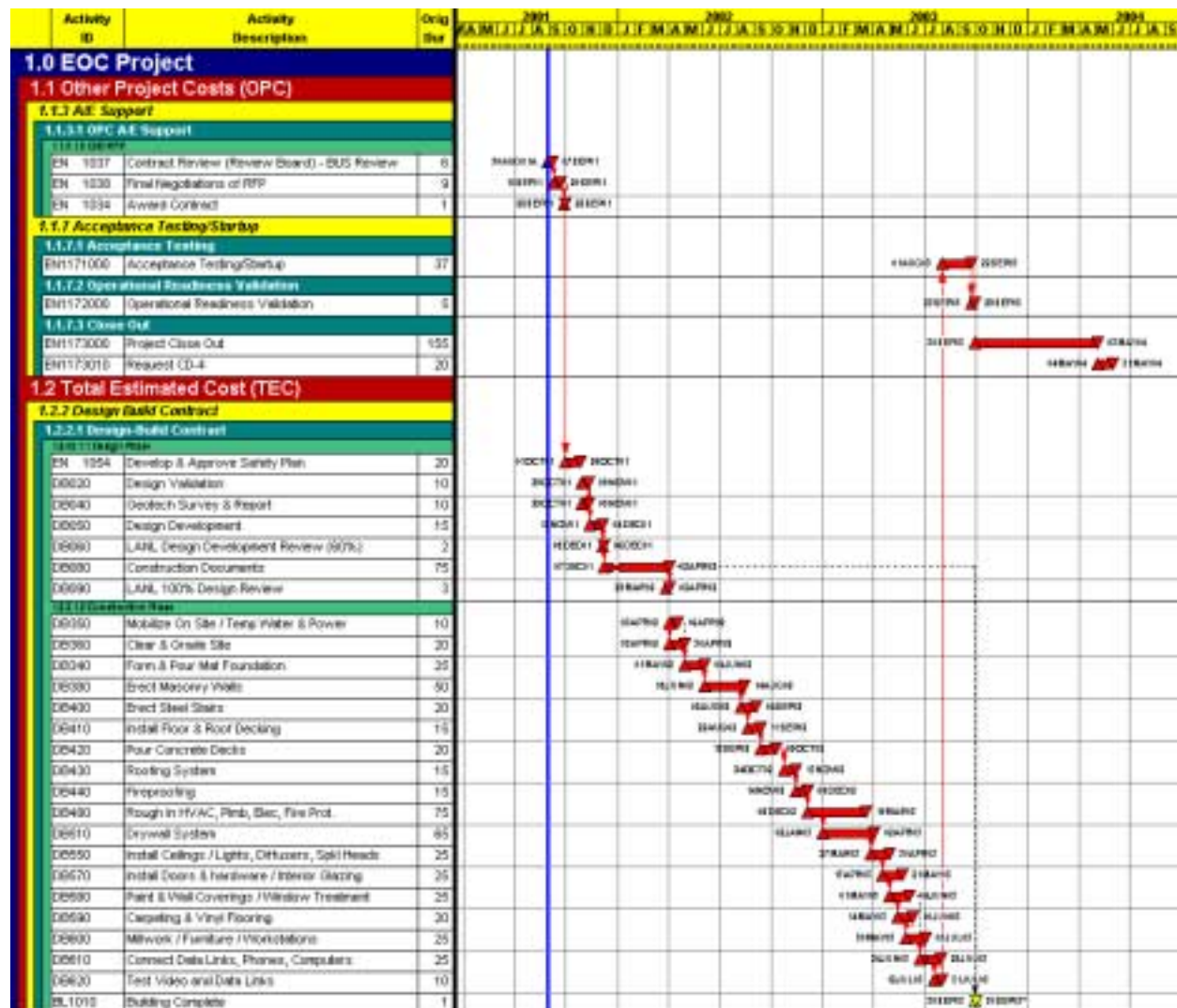
<b>Milestone Description</b>	<b>Scheduled Date of Completion</b>	<b>Actual Date of Completion</b>
Receive Critical Decision 0 (CD-0)	-	February 20, 2001
EOC Project Start	-	September 6, 2000
Award A/E Contract	-	November 1, 2000
Request CD-1	June 26, 2001	June 26, 2001
Receive Finding of No Significant Impact	August 30, 2001	July 26, 2001
Select Design-Build Contractor	September 10, 2001	September 6, 2001
Request CD-2/CD-3	September 10, 2001	
Award Design-Build Contract	September 28, 2001	
Formal Application for Design Substantiation (60%)	December 11, 2001	
Start Site Work	February 20, 2002	
Approve Title Design	July 2, 2002	
Site Work Complete	July 31, 2003	
Start Building Construction	May 01, 2002	
Utility Work Complete	July 31, 2003	
Special Systems Complete	August 01, 2003	
Building Complete	August 01, 2003	
Beneficial Occupancy	September 30, 2003	
Design-Build Contract Closeout	November 14, 2003	
Receive CD-4	May 4, 2004	
Project Closeout Report	June 1, 2004	

### 7.4. Critical Activities

The critical activities provided in the figure below reflect information provided in the selected proposal for the design-build contract.



Figure 7-3: Critical Activities



## 7.5. Cost Baseline

The cost baseline scope for Levels 1, 2, and 3 of the WBS are defined in the WBS Dictionaries defined in Attachment 1 this document. The information provided reflects cost information provided in the selected proposal for the design-build contract. Any changes that occur as a result of final contract negotiations will constitute an update to this PEP. The total project cost (TPC) and the preliminary cost breakdown for the project is shown in Table 7-2.



**Table 7-2: Total Project Costs (TPC)**

<b>Post-Bid Cost Summary</b>			
		<i>% of B.1 Thru B.6</i>	
		<i>"Construction Cost"</i>	
<b>A. DESIGN PHASE</b>			<b>\$ 1,059,794</b>
A.1 Engineering Design			\$ 900,000
A.1.1 Prelim.Design-Title I (A/E)	0.0%	\$ -	
A.1.2 Final Design - Title II (A/E)	5.9%	\$ 900,000	
A.2 Management	1.0%	\$ 159,794	
A.2.1 Title I & II Design Mgmt.(LANL)	1.0%	<u>\$ 159,794</u>	
Design Management (LANL)(Title I & Title II)	0.9%	\$ 138,974	
Conceptual Design - LANL Engineering Support	0.0%	\$ -	
Design-Build LANL Engineering	0.1%	\$ 20,820	
A.2.2 Project Management (LANL)	0.0%	<u>\$ -</u>	
Conceptual Phase		\$ -	
<b>B. CONSTRUCTION PHASE</b>			<b>\$ 16,656,468</b>
B.1 Improvements to Land			\$ 236,201
B.2 Building Construction			\$ 9,048,963
B.3 Site Utilities			\$ 1,882,893
B.4 LANL Construction			\$ 543,330
B.4.1 Safeguards and Security		\$ 167,000	
B.4.2 Communications		\$ 376,330	
B.5 JCNNM Construction			\$ 115,000
B.5.1 Utility Tie-Ins		\$ 100,000.00	
B.5.2 Fire Alarm Tie-Ins		\$ 15,000.00	
B.6 Capital Equipment			\$ 3,528,970
B.6.1 Special Equipment		\$ 672,222	
B.6.2 Standard Equipment/Furniture		\$ 2,856,748	
<b>Subtotal "Construction Cost", B.1 thru B.6 Above = \$ 15,355,357</b>			
B.7 Inspection, Proj.Liaison, Testing, Checkout & Acceptance			\$ 200,000
B.7.1 Title III Design (A/E)	1.3%	\$ 200,000	
B.7.2 Title III Design (LANL)	0.0%	\$ -	
B.8 Management			\$ 1,101,111
B.8.1 Project Management (LANL)	3.8%	<u>\$ 578,825</u>	
Capital Phase - Design-Build		\$ 578,825	
B.8.2 Construction Mgmt.(LANL)	0.5%	<u>\$ 75,185</u>	
Construction Inspection Services		\$ 55,594	
Safety Inspection Services		\$ 19,591	
B.8.3 Construction Management Oversight Contract (CMO)		\$ 447,101	
<b>C. ESCALATION (See Summary Of Burdens, Escalation &amp; Contingency) @ 0.35%</b>			<b>\$ 63,704</b>
C.1 Design Phase			\$ 934
C.2 Construction Phase			\$ 62,770
NOTE: Fixed price contract includes escalation of design build contractor design and construction items			
<b>D. LABORATORY BURDENS (See Summary Of Burdens, Escalation &amp; Contingency)</b>			<b>\$ 316,108</b>
<b>E. CONTINGENCY (See Summary Of Burdens, Escalation &amp; Contingency) @ 10.00%</b>			<b>\$ 1,859,477</b>
E.1 Design Phase			\$ 201,098
E.2 Construction Phase			\$ 1,658,379
<b>TOTAL ESTIMATED COST (TEC)</b>			<b>\$ 19,955,551</b>
<b>OTHER PROJECT COSTS (OPC)</b>			<b>\$ 1,534,419</b>
Conceptual Design (Actual Costs)			\$ 1,259,720
Design/Build RFP			\$ -
NEPA & Environmental Assessments (Actual Costs)			\$ 167,794
Other ES&H Costs			\$ 76,628
Other Project Costs			\$ 30,277
<b>TOTAL PROJECT COST (TPC)</b>			<b>\$ 21,489,970</b>

A life cycle cost analysis has been performed for this project. The factors that were considered include the initial cost of the structure, the periodically recurring renovation costs, and the annual costs.

Table 7-3 summarizes the estimated life-cycle costs. The initial cost for the structure was the TEC figure of \$19,955,551. The recurring costs for major renovations expected over a 30-year life cycle for the building are expected to run 10% of the initial construction cost and occur every ten years. The annual costs were based on a gross square footage (SF) of 28,944. The net present value of the recurring and annual costs was calculated using a 3.5% discount rate. A more detailed discussion of the life cycle cost analysis can be found in the EOC *Conceptual Design Report*.

**Table 7-3: Life-Cycle Cost Analysis**

Life-Cycle Cost item	\$/SF	Total Cost for New Facility
<b>INITIAL COSTS</b>		
Total Estimated Cost (TEC)	\$690.18	<b>\$19,955,551</b>
<b>RECURRING COSTS</b>		
Replacement Costs Every 10 Years	\$48.92	\$1,415,925
<b>ANNUAL COSTS</b>		
Utilities	\$4.00	\$115,776
Preventive Maintenance	\$2.00	\$57,888
Grounds Maintenance	\$0.75	\$21,708
Janitorial Services	\$1.75	\$50,652
<b>TOTAL ANNUAL COSTS</b>	<b>\$8.50</b>	<b>\$246,024</b>
<b>PRESENT VALUE OF ANNUAL &amp; RECURRING COSTS</b>		<b>\$6,744,720</b>
<b>LIFE CYCLE COST</b>		<b>\$26,700,271</b>

## 8. Project Controls System Description

### 8.1. Integrated Systems

The project controls and reporting management systems have been developed to meet or exceed the requirements DOE Order 413.3. As part of the CGR Project, the project controls approach for the EOC project follows the overall project controls approach established for the CGR Project, which is documented in the *Cerro Grande Rehabilitation Project Execution Plan*. The integrated project controls systems include the use of work planning, scheduling and reporting software, cost control, funds control, records management, project status meetings, project status reporting, and the various parameters of the change control process. The use and approval of applicable contingencies and management reserves is also included.

### 8.2. Project Performance

#### Work Planning, Scheduling, and Reporting Software

The EOC project is using industry standard project management software, including Primavera Project Planner™ scheduling software and PRISM™ Cost Management software to plan, track and report on this project. Reports will be summarized based on the WBS. The PTL will monitor the technical progress of the project, evaluating progress against programmatic needs. Whenever scope changes are anticipated or proposed, the PTL will evaluate all potential impacts and fully document the conclusions. The PTL will monitor and evaluate schedule and cost for design and construction work to identify variances and to assess programmatic impacts. The baseline change control process established by PMD Procedure 109, *Project Controls* will be utilized to provide change control and to manage the project baselines.

#### Cost Control and Funds Control

PMD Procedure 109 also provides guidelines for executing activities associated with cost control, funds control, and work authorization for the project. These processes will comply with the *Cerro Grande Rehabilitation Project Change Control Procedure* (CGR-Procedure 002, Rev. 0). Funds received for the project are reconciled in the scope of work associated with those funds, and any discrepancies are documented through the baseline management process. Procedures in place ensure that funds received

are used for the specific scope of work identified for the funding. These controls will prevent costs in excess of authorized funding.

## Records Management

Project files will be maintained by the PTL in accordance with PMD Procedure 206, *Document Control* and PMD Procedure 207, *Project Records Management*. Copies of appropriate documents will be distributed to the EOC project team. At project completion, these documents will be turned over to the Facility Manager and to Record Archives.

## Project Status Meetings

The EOC project team will attend monthly project status meetings to monitor work performed on the EOC project. The PTL will conduct the project status meetings with the participation of all team members. Each WBS Manager will be responsible for briefing the project team on progress, issues, and planned activities for his or her task as well as cost and schedule information. The project controls office will summarize this information and distribute it to the EOC project team and management. NNSA will be invited to attend the monthly progress meetings and will receive progress updates to stay current on action items and key project issues. In addition, the EOC project team will hold weekly meetings with the design-build contractor throughout the life of the project.

### 8.3. Project Status Reporting

Monthly reports will be prepared and distributed to NNSA based on the integration of monthly information obtained from all project participants. These reports will be part of the monthly CGR Project reports distributed by the 23<sup>rd</sup> of each month for the previous month's report. The PTL will use PRISM™ software to measure and report project progress. Cost and schedule variances for baselines, schedule progress, and estimated cost at completion (EAC) will be tracked. The management philosophy is to manage by exception using a graded approach: activities that are reported to be within cost and schedule forecasts do not need the same level of management attention as activities with significant costs or schedule variances. Project Controls will compile and analyze the financial data, review progress with the PTL, coordinate completion reports, and publish and distribute the reports.

The PTL reviews the accuracy of project data to ensure it is reported accurately and conducts monthly reviews to determine whether corrective actions are necessary. The monthly report will provide an explanation of any corrective actions necessary to address cost or schedule variances. Variance reporting and corrective actions will ensure implementation of the baseline change control process identified in Section 8.4 below.

### 8.4. Baseline Change Control Process

Establishment and maintenance of baselines are the most important aspects of project control. Changes to baselines will be carefully controlled to avoid loss of control and distortion in performance reporting. The purpose of the project change control system is to assure that:

- Action on all change requests is deliberate and without undue delay, but carried out without interfering disproportionately with project progress.
- The scope, schedule, and technical impacts of proposed changes are developed and considered by all appropriate parties.
- The collected evaluations are considered in the approval or rejection of the proposed changes.
- All appropriate parties are informed of proposed changes and their disposition.
- Baseline documentation is controlled and updated as appropriate to reflect approved changes.

Scope, schedule, and cost baselines established upon approval of Critical Decision 2 (Approve Performance Baseline) will be subject to the BCCB review process established for the CGR Project documented in the *Cerro Grande Rehabilitation Project Execution Plan*. Change control thresholds have been established at four levels (Level 0 is at the Deputy Secretary of Energy approval authority) for the

EOC project to approve, disapprove, or endorse (i.e., recommend approval to a higher-level BCCB) all proposed baseline changes. The three levels, governing baseline change control for the EOC project, are depicted in Table 8-1 below.

**Table 8-1: Change Control Thresholds**

	<b>Level 0</b> <b>NNSA-HQ BCCB</b> <b>Deputy Secretary of</b> <b>Energy</b>	<b>Level 1</b> <b>NNSA-HQ BCCB</b> <b>Acquisition Executive</b>  <b>Chairperson:</b> <b>David H. Crandall</b>	<b>Level 2</b> <b>NNSA-LAAO/LANL BCCB</b> <b>Federal Project Manager</b> <b>Chairpersons: Herman C.</b> <b>LeDoux</b> <b>CGR Project Director</b> <b>James L. Holt</b>	<b>Level 3</b> <b>LANL BCCB</b> <b>CGR Construction</b> <b>Projects Manager</b> <b>EOC Project Team Leader</b> <b>Chairperson: Keith R. Orr</b>
<b>Scope</b>	New scope/performance not in conformance with current approved Project Data Sheet.	Changes to scope that affect mission need requirements.	Changes to scope that affect EOC project WBS Level 2.*	Changes to scope that affect EOC project WBS Level 3.*
<b>Schedule</b>	6 or more months increase (cumulative) in a project-level schedule milestone date.	3-6 or more months increase (cumulative) in project-level schedule milestones: CD-2/3: September 26, 2001 CD-4: May 4, 2004	2 to 3 months increase (cumulative) in an EOC project WBS Level 3* schedule milestone date.	Up to 2 months increase (cumulative) in an EOC project WBS Level 3* schedule milestone date.
<b>Cost</b>	Baseline change of \$5M, or 25 percent of Total Project Cost and/or Total Estimated Cost (whichever is less).	Any increase in Total Project Cost or Total Estimated Cost.**	Changes to cost that affect EOC project WBS Level 3* greater than \$250K.	Changes to cost that affect EOC project WBS Level 3* up to \$250K.

\* WBS Levels are defined, including budgets in Section 5.0 and Attachment 1.

\*\* 25% increase in TEC triggers congressional notification.

Should a baseline change be required, the PTL will initiate a LANL Baseline Change Proposal (BCP). The BCP is assigned a number and incorporated into the BCP Log, which tracks the project baselines. Each lower-level board that approves a BCP will provide the next higher-level board with a copy of the approved baseline change package and will endorse all proposed changes to be considered by the next higher-level board. This process ensures proper oversight of all proposed changes, which can originate at any level in the project, but must be fully evaluated at Level 3. The thresholds determine the appropriate management approval level. Once the BCP is approved by the BCCB, the baseline documentation will be revised accordingly.

The FPM and the CGR Project Director will approve the use of management reserve and contingency that affect WBS Level 3 greater than \$250K. The PTL will approve the use of management reserve and contingency that affect WBS Level 3 up to \$250K. A log will be used to track the distribution of the management reserve and will be maintained by Project Controls. Adjustments to the EAC including management are made monthly. The EAC value of management reserve reflects the current estimate of remaining management reserve usage requirements through project completion.

Any baseline change caused by a Congressional action, such as an appropriation act that reduces funding, shall follow the baseline change control process and must be documented and approved by the appropriate Secretarial Acquisition Executive/Acquisition Executive within 4 months from the time the congressional action is enacted. The EOC PTL will be responsible for determining and documenting the resulting impacts to other baselines, when appropriate, and will provide information copies of the change impacts to appropriate management levels.

If changes (either approved or directed) exceed congressionally mandated thresholds, congressional notification is required prior to approval and authorization to proceed. All congressional notifications must be coordinated through the Chief Financial Officer prior to submission in accordance with DOE Order 135.1, *Budget Execution – Funds Distribution and Control*.

## 9. Risk Management

Risk is an inherent part of all activities, whether the activity is simple and small, or large and complex. Risk management is necessary to determine and control risks to an acceptable level. The EOC project team has engaged in risk management activities from its inception. The first risk management actions of the project were to establish sound project baseline documents, making sure that baseline flaws do not become project risks. Development of the CDR was a risk management strategy to develop the information required for the Design-Build Performance Specifications and to verify that a reasonable design exists that yields a cost estimate within the established EOC project construction budget.

Alternative approaches for procuring the EOC were considered in the *EOC Acquisition Plan* (CGRP-0012-011, R1). The *Acquisition Plan* includes a qualitative discussion of broad project risks based on past LANL conventional facilities construction projects experience. It concludes that the strategy of least risk is to acquire the EOC through a single D-B contract.

The EOC project team has concluded the following specific risk management actions in accordance with PMD Procedure 104, *Risk Assessment and Management* that have identified and evaluated risks in several different ways based on different perspectives.

- **Management Level Determination** – The Project Team Leader (PTL) and project team performed a Management Level (ML) Determination as required by LIR 230-01-02.2, *Graded Approach for Facility Work* using the process, form, and format described in LIG 230-01-02.0, *Graded Approach for Facility Work*. The EOC project was determined to be an ML-3, except for the vault, which was determined to be an ML-2. LIR 230-01-02.2 specifies minimum project management and quality management procedural requirements based on the highest rating found (ML-2). The EOC project has its own project specific project management and quality assurance plans and procedures as required by the ML-2 rating and LIR 230-01-02.2 in order to minimize risk.
- **Risk Screening** – The PTL and project team performed a risk assessment using the checklist found in PMD Procedure 104 (similar to those found in DOE M 413.X and DOE Good Practice Guide (GPG)-FM-007, *Risk Analysis and Management*). The risks identified with the checklist were quantified according to probability of occurrence and consequence of occurrence as described in DOE M 413.X and DOE GPG-FM-007. The completed checklist, the quantitative assessment, and the associated mitigation strategies and actions are found in the *EOC Risk Management Plan and Risk Assessment Report* (CGRP-0012-015, R0).
- **Risk Assessment** – A probabilistic Project Risk Assessment (PRA) for the EOC project was conducted by the Probabilistic Risk Analysis and Hazard Analysis Group of the Decision Applications Division (D-11). This PRA examined the scope, schedule, and cost risks for the activities described in the 95% CDR for the EOC. The results are summarized in the *EOC Risk Management Plan and Risk Assessment Report*. For more detailed information, refer to the *EOC Project Risk Assessment* (CGRP-0012-014, R0).

The *EOC Risk Management Plan and Risk Assessment Report* has been prepared to define the process for risk management for the EOC project. It describes the roles and responsibilities of the project team in performing the risk management functions, and defines reporting, tracking, and closure requirements for risk-related information. In addition, it documents the results of the risk screening process and the PRA, including risk description, occurrence probabilities and consequences, and the mitigation strategies and actions for moderate or high risks.

## 10. Acquisition Strategy and Acquisition Plan

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This section provides a discussion of the proposed method of accomplishing the project, including the use of contract labor and the type of contract vehicles. A Memorandum of Understanding (MOU) on the Required Documents and Process of Obtaining NNSA Approvals for Line-Item Construction Projects under the Cerro Grande Rehabilitation Project using a Design/Build Construction Approach, (CGR-01-199) dated June 8, 2001 has been approved to define the required documents and process for obtaining critical decisions from NNSA for the CGR Line Item Projects.

### 10.1. Acquisition Strategy

As stated in the MOU, CD-0 was approved by Dr. David Crandall, Assistant Deputy Administrator of Research, Development, and Simulation for Defense Programs on February 20, 2001, for all the CGR Project Line Item construction projects. Therefore, the Acquisition Strategy is to proceed with the execution of the CGR Project line-item construction projects through the University of California, hence a separate Acquisition Strategy document will not be created.

## **10.2. Acquisition Plan**

An Acquisition Plan has been prepared in accordance with Federal Acquisition Regulation (FAR) Subpart 7.1, *Acquisition Plans*, and DOE O 413.3. The purpose of the plan is to ensure that the government meets its needs in the most effective, economical, and timely manner. The EOC Project is an "Other Project" in the terminology of DOE O 413.3 with TEC less than \$100 M and greater than \$20M. The acquisition authority for the EOC Project is as follows:

- The FPM and Federal Contracting Officer have approval authority for the Acquisition Plan. They have EOC project WBS Level 2 baseline change approval authority.
- The FPM is team leader of the Federal Integrated Project Team and a member of the LANL Integrated Project Team that executes the project.
- The PTL is a project management specialist drawn from the LANL Project Management Division and appointed by the Security (S)-Division leader.

The team has been appointed according to the requirements of LANL LIR 220-01-01.4. The team consists of a PTL, a Technical Project Leader, EPC Project Leader, and Support Services Project Leader, SMEs, a Quality Assurance Specialist, a Health Safety and Environment Specialist, a Procurement and Contracts Specialist, a Cost and Schedule Analyst, and a Security Specialist.

A more detailed discussion of the acquisition plan for this project can be found in the EOC *Acquisition Plan* (CGRP-0012-011, R1).

## **11. Technical Considerations**

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### **11.1. Value Engineering**

As the design-build evaluation is to be based on a best value procurement process in which independent design solutions are proposed, this best value approach will be considered equivalent to a value engineering review. This approach to value engineering is documented in the MOU on the Required Documents and Process of Obtaining NNSA Approvals for Line-Item Construction Projects under the Cerro Grande Rehabilitation Project using a Design/Build Construction Approach, dated June 8, 2001.

### **11.2. Configuration Management**

Successful accomplishment of any project requires that all participants be provided accurate information on the project and its end product(s) during any point in the project life cycle. As a project proceeds through its life cycle, the number of participants grows significantly and the volume of information grows exponentially. As part of the CGR Project, the configuration management approach for the EOC project follows the overall configuration management approach established for the CGR Project in the *Cerro Grande Rehabilitation Project Execution Plan*.

In addition, the EOC *Design-Build Specifications* invoke DOE O 414.1A, *Quality Assurance*. This order sites definite requirements for implementation of the Quality Assurance Criteria. The D-B contractor will be required to submit a Quality Assurance Plan (QAP) customized to the EOC project within 20 days of contract award. The QAP is required to identify design records, documents, and software that are maintained and tracked for the EOC project. The contractor will be audited to the requirements set forth in the QAP. Further, the General Provisions of the contract document speaks to changes initiated by the University and those initiated by the D-B contractor.

### **11.3. Project Quality Management**

As part of the CGR Project, the quality management approach for the EOC project follows the overall quality management approach established for the CGR Project. The *Cerro Grande Rehabilitation Project*

*Quality Management Plan* (CGR Plan-003, Rev. 0) provides details of the quality management approach for all CGRP activities.

A tailored Project Quality Management Plan (PQMP) has been prepared for the EOC project. The EOC *Project Quality Management Plan* (CGRP-0012-007, Rev. 0) will specifically address the 10 criteria of DOE Order 414.1A. The EOC PQMP has been developed to establish consistent guidance, coordination, and controls for assuring work is appropriately planned for the EOC project. The management systems and quality commitments defined in the PQMP will be implemented by the procedures and controls also described or referenced in the plan. A graded approach is applied commensurate with the level of hazards and risks for the specified scope of work.

As mentioned in Section 11.2, the EOC *Design-Build Specifications* invoke DOE O 414.1A. This order sites definite requirements for implementation of the Quality Assurance Criteria. The D-B contractor will be required to submit a QAP customized to the EOC project within 20 days of contract award. The contractor will be audited to the requirements set forth in the QAP.

#### **11.4. Integrated Safeguards and Security Management Plan**

As part of the CGR Project, the Integrated Safeguards and Security Management (ISSM) approach for the EOC project follows the overall ISSM approach established for the CGR Project. The *Cerro Grande Rehabilitation Project Integrated Safeguards and Security Management Plan* provides details of the ISSM approach for all CGR Projects. A more detailed discussion of the security approach for the EOC project is provided in Section 3.4 of this document.

#### **11.5. Integrated Safety Management Plan**

As part of the CGR Project, the integrated safety management approach for the EOC project follows the overall integrated safety management approach established for the CGR Project. The *Cerro Grande Rehabilitation Project Integrated Safety Management Plan* (CGRP-Plan-005, Rev. 0) provides details of the integrated safety management approach for all CGR Projects.

#### **11.6. Project Closeout and Transition to Operations**

Project closeout begins after CD-4 is received. Project closeout will be completed once the final cost closing statement and final cost report, which are part of the Project Closeout Package, are approved by NNSA. Project closeout and turnover and acceptance activities will be conducted in accordance with PMD Procedure 606, *Project Acceptance and Closeout*.

Test and performance verification criteria will be prepared, reviewed, and approved by the Facility Owning Division. The Facility Owning Division will participate in the actual testing and concur in test results. Acceptance testing and start-up activities will be completed in accordance with the procedures and criteria set forth in the Integrated Test and Acceptance Plans developed during final design.

### **12. References**

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#### **DOE and OMB Documents**

- DOE GPG-FM-007, *Risk Analysis and Management*,
- DOE O 135.1, *Budget Execution – Funds Distribution and Control*, September 30, 1995.
- DOE O 151.1A, *Comprehensive Emergency Management Systems*, November 1, 2000.
- DOE O 413.3, *Program and Project Management for the Acquisition of Capital Assets*, October 13, 2000.
- DOE M 413.X, *Manual for Program and Project Management for the Planning, Programming, Budgeting, and Acquisition of Capital Assets*, October 2000.
- DOE O 414.1A Chg. 1, *Quality Assurance*, May 31, 2001.
- DOE O 420.1 Chg. 3, *Facility Safety*, November 22, 2000.
- DOE O 430.1A, *Life Cycle Asset Management*, October 14, 1998.
- DOE-STD-1021-93 Chg. 1, *Natural Phenomena Hazard Performance Categorization Guidelines for Structures, Systems, and Components*, January 1996.
- FAR Subpart 7.1, *Acquisition Plans*, June 25, 2001.

- OMB Circular A-11, *Preparation and Submission of Budget Estimates*, July 17, 2001.
- *Joint Program Office Direction on Project Management*, March 30, 1998.
- *Construction Management Program Plan (DP-10)*, June 1, 1999.

#### **LANL Documents**

- LIR 220-01-01.4, *Construction Project Management*, April 27, 2000.
- LIR 230-01-02.2, *Graded Approach for Facility Work*, September 11, 1998.
- LIG 230-01-02.0, *Graded Approach for Facility Work*, December 24, 1997.
- LIR 300-00-05.2, *Facility Hazard Classification*, April 12, 2001.
- PMD Procedure 104, Rev. 1, *Risk Assessment and Management*, March 23, 1998.
- PMD Procedure 109, Rev. 3, *Project Controls*, April 20, 2000.
- PMD Procedure 206, Rev. 2, *Document Control*, March 27, 1998.
- PMD Procedure 207, Rev. 3, *Project Records Management*, November 30, 1998.
- PMD Procedure 404, Rev. 1, *Preparing the Project ESH Plan and Safety Strategy*, February 18, 1998.
- PMD Procedure 408, Rev. 0, *Starting the ESH Process for FSS-6 Projects*, December 3, 1998.
- PMD Procedure 606, Rev. 1, *Project Acceptance and Closeout*, June 6, 2001.

#### **CGR Project Documents**

- CGR-Plan 001, Rev. 0, *Cerro Grande Rehabilitation Project Execution Plan*, August 18, 2000.
- CGR-Plan 002, Rev. 0, *Cerro Grande Rehabilitation Project Management Plan*, December 19, 2000.
- CGR-Plan 003, Rev. 0, *Cerro Grande Rehabilitation Project Quality Management Plan*, DRAFT.
- CGR-Plan-004, Rev. 0, *Cerro Grande Rehabilitation Project Integrated Safeguards and Security Management Plan*, February 22, 2001.
- CGR-Plan 005, Rev. 0, *Cerro Grande Rehabilitation Project Integrated Safety Management Plan*, February 12, 2001.
- CGR-Procedure 002, Rev. 0, *Cerro Grande Rehabilitation Project Change Control Procedure*, DRAFT.
- CGR-01-199, *Memorandum of Understanding on the Required Documents and Process of Obtaining DOE Approvals for Line-Item Construction Projects Under the Cerro Grande Rehabilitation Project Using a Design/Build Construction Approach*, June 8, 2001.

#### **EOC Project Documents**

- CGRP-0012-001, R0, *Mission Need Statement*, January 5, 2001.
- CGRP-0012-002, R0, *Program Requirements Document*, January 23, 2001.
- CGRP-0012-003, R0, *Functional and Operational Requirements*, June 22, 2001.
- CGRP-0012-005, R0, *Design Criteria*, June 22, 2001.
- CGRP-0012-006, R0, *ESH Plan and Safety Strategy*, July 3, 2001.
- CGRP-0012-007, R0, *Project Quality Management Plan*, July 3, 2001.
- CGRP-0012-008, R0, *Conceptual Design Report*, June 22, 2001.
- CGRP-0012-009, R0, *Preliminary Hazards Analysis*, June 22, 2001.
- CGRP-0012-011, R1, *Acquisition Plan*, September 5, 2001.
- CGRP-0012-012, R0, *Design-Build Specifications*, June 22, 2001.
- CGRP-0012-013, R0, *Project Systems Description*, June 22, 2001.
- CGRP-0012-014, R0, *Project Risk Assessment*, June 2001.
- CGRP-0012-015, R0, *Risk Management Plan and Risk Assessment Report*, DRAFT.



## **Attachment 1 WBS Dictionary**

1. PROJECT TITLE / PARTICIPANT Emergency Operations Center / Cerro Grande Rehabilitation	2. DATE 09/05/01	3. IDENTIFICATION NUMBER 100143
4. WBS ELEMENT CODE 1.0	5. WBS ELEMENT TITLE EOC Project	
6. INDEX LINE NO. 1	7. REVISION AND AUTHORIZATION 0	8. REV DATE 09/05/01
9. APPROVED CHANGES		
10. SYSTEM DESIGN DESCRIPTION Emergency Operations Center - all elements		11. BUDGET AND REPORTING NUMBER N/A: Roll-up
12. ELEMENT TASK DESCRIPTION		
<b>A. TECHNICAL BASELINE</b> All activities required to complete design, construction, and determination of operations readiness for the EOC. Includes both OPC and TEC funded activities		
<b>B. SCHEDULE BASELINE</b> 1.0 EOC Project	<b>START</b> 09/06/00	<b>STOP</b> 06/01/04
<b>C. COST BASELINE</b> 1.0 EOC Project	<b>TOTAL</b> \$21,489,970	
<b>INCLUDES CONTINGENCY</b> <input checked="" type="checkbox"/>		

<b>1. PROJECT TITLE / PARTICIPANT</b> Emergency Operations Center / Cero Grande Rehabilitation	<b>2. DATE</b> 09/05/01	<b>3. IDENTIFICATION NUMBER</b> 100143										
<b>4. WBS ELEMENT CODE</b> 1.1	<b>5. WBS ELEMENT TITLE</b> Other Project Costs (OPC)											
<b>6. INDEX LINE NO.</b> 2	<b>7. REVISION AND AUTHORIZATION</b> 0	<b>8. REV DATE</b> 09/05/01										
<b>9. APPROVED CHANGES</b>												
<b>10. SYSTEM DESIGN DESCRIPTION</b>		<b>11. BUDGET AND REPORTING NUMBER</b> N/A: Roll-up										
<b>12. ELEMENT TASK DESCRIPTION</b>  <b>A. TECHNICAL BASELINE</b> All activities occurring before authorization to start design - build activity and all activities following completion / acceptance of construction that are required to prepare for operations. Pre-design build activities include: Development of project planning documents, development of the conceptual design, procurement solicitation actions, quality program formation, preliminary hazards assessment, environmental assessment and NEPA activities, independent reviews required to certify project, and project management. Post-construction activities include final safety analysis, readiness determination, and project close-out.  <table> <tr> <td><b>B. SCHEDULE BASELINE</b></td> <td><b>START</b></td> <td><b>STOP</b></td> </tr> <tr> <td>1.1 Other Project Costs (OPC)</td> <td>09/06/00</td> <td>06/01/04</td> </tr> </table> <table> <tr> <td><b>C. COST BASELINE</b></td> <td><b>TOTAL</b></td> </tr> <tr> <td>1.1 Other Project Costs (OPC)</td> <td>\$1,534,419</td> </tr> </table>			<b>B. SCHEDULE BASELINE</b>	<b>START</b>	<b>STOP</b>	1.1 Other Project Costs (OPC)	09/06/00	06/01/04	<b>C. COST BASELINE</b>	<b>TOTAL</b>	1.1 Other Project Costs (OPC)	\$1,534,419
<b>B. SCHEDULE BASELINE</b>	<b>START</b>	<b>STOP</b>										
1.1 Other Project Costs (OPC)	09/06/00	06/01/04										
<b>C. COST BASELINE</b>	<b>TOTAL</b>											
1.1 Other Project Costs (OPC)	\$1,534,419											
<b>INCLUDES CONTINGENCY</b> <input checked="" type="checkbox"/>												

<b>1. PROJECT TITLE / PARTICIPANT</b> Emergency Operations Center / Cerro Grande Rehabilitation	<b>2. DATE</b> 09/05/01	<b>3. IDENTIFICATION NUMBER</b> 100143					
<b>4. WBS ELEMENT CODE</b> 1.1.1	<b>5. WBS ELEMENT TITLE</b> Project Management						
<b>6. INDEX LINE NO.</b> 3	<b>7. REVISION AND AUTHORIZATION</b> 0	<b>8. REV DATE</b> 09/05/01					
<b>9. APPROVED CHANGES</b>							
<b>10. SYSTEM DESIGN DESCRIPTION</b> N/A		<b>11. BUDGET AND REPORTING NUMBER</b> N/A: Roll-up					
<b>12. ELEMENT TASK DESCRIPTION</b>  <b>A. TECHNICAL BASELINE</b> All activities required to plan the project, establish cost / schedule control program, establish quality mangement program, establish project administrative support, and manage design-build solicitation.  <b>B. SCHEDULE BASELINE</b> <table border="0" style="width: 100%;"> <tr> <td style="width: 50%;">1.1.1 Project Management</td> <td style="width: 25%; text-align: center;"><b>START</b> 09/06/00</td> <td style="width: 25%; text-align: center;"><b>STOP</b> 09/28/01</td> </tr> </table> <b>C. COST BASELINE</b> <table border="0" style="width: 100%;"> <tr> <td style="width: 70%;">1.1.1 Project Management</td> <td style="width: 30%; text-align: right;"><b>TOTAL</b> \$83,222</td> </tr> </table> <b>INCLUDES CONTINGENCY</b> <input type="checkbox"/>			1.1.1 Project Management	<b>START</b> 09/06/00	<b>STOP</b> 09/28/01	1.1.1 Project Management	<b>TOTAL</b> \$83,222
1.1.1 Project Management	<b>START</b> 09/06/00	<b>STOP</b> 09/28/01					
1.1.1 Project Management	<b>TOTAL</b> \$83,222						

<b>1. PROJECT TITLE / PARTICIPANT</b> Emergency Operations Center / Cerro Grande Rehabilitation	<b>2. DATE</b> 09/05/01	<b>3. IDENTIFICATION NUMBER</b> 100143										
<b>4. WBS ELEMENT CODE</b> 1.1.2	<b>5. WBS ELEMENT TITLE</b> Project Development											
<b>6. INDEX LINE NO.</b> 10	<b>7. REVISION AND AUTHORIZATION</b> 0	<b>8. REV DATE</b> 09/05/01										
<b>9. APPROVED CHANGES</b>												
<b>10. SYSTEM DESIGN DESCRIPTION</b> N/A		<b>11. BUDGET AND REPORTING NUMBER</b> N/A: Roll-up										
<b>12. ELEMENT TASK DESCRIPTION</b>  <b>A. TECHNICAL BASELINE</b> Produce a mission need statement, program requirements documents, and other project basis documents required by LAN LIR 220-01-01.4  <table> <tr> <td><b>B. SCHEDULE BASELINE</b></td> <td><b>START</b></td> <td><b>STOP</b></td> </tr> <tr> <td>1.1.2 Project Development</td> <td>12/11/00</td> <td>09/27/01</td> </tr> </table> <table> <tr> <td><b>C. COST BASELINE</b></td> <td><b>TOTAL</b></td> </tr> <tr> <td>1.1.2 Project Development</td> <td>\$323,178</td> </tr> </table> <b>INCLUDES CONTINGENCY</b> <input type="checkbox"/>			<b>B. SCHEDULE BASELINE</b>	<b>START</b>	<b>STOP</b>	1.1.2 Project Development	12/11/00	09/27/01	<b>C. COST BASELINE</b>	<b>TOTAL</b>	1.1.2 Project Development	\$323,178
<b>B. SCHEDULE BASELINE</b>	<b>START</b>	<b>STOP</b>										
1.1.2 Project Development	12/11/00	09/27/01										
<b>C. COST BASELINE</b>	<b>TOTAL</b>											
1.1.2 Project Development	\$323,178											

<b>1. PROJECT TITLE / PARTICIPANT</b> Emergency Operations Center / Cerro Grande Rehabilitation	<b>2. DATE</b> 09/05/01	<b>3. IDENTIFICATION NUMBER</b> 100143										
<b>4. WBS ELEMENT CODE</b> 1.1.3	<b>5. WBS ELEMENT TITLE</b> A/E Support											
<b>6. INDEX LINE NO.</b> 12	<b>7. REVISION AND AUTHORIZATION</b> 0	<b>8. REV DATE</b> 09/05/01										
<b>9. APPROVED CHANGES</b>												
<b>10. SYSTEM DESIGN DESCRIPTION</b> N/A		<b>11. BUDGET AND REPORTING NUMBER</b> N/A: Roll-up										
<b>12. ELEMENT TASK DESCRIPTION</b>  <b>A. TECHNICAL BASELINE</b> Prepare conceptual design report, prepare design-build specification  <table> <tr> <td><b>B. SCHEDULE BASELINE</b></td> <td><b>START</b></td> <td><b>STOP</b></td> </tr> <tr> <td>1.1.3 A/E Support</td> <td>10/10/00</td> <td>09/28/01</td> </tr> </table> <table> <tr> <td><b>C. COST BASELINE</b></td> <td><b>TOTAL</b></td> </tr> <tr> <td>1.1.3 A/E Support</td> <td>\$782,032</td> </tr> </table> <b>INCLUDES CONTINGENCY</b> <input type="checkbox"/>			<b>B. SCHEDULE BASELINE</b>	<b>START</b>	<b>STOP</b>	1.1.3 A/E Support	10/10/00	09/28/01	<b>C. COST BASELINE</b>	<b>TOTAL</b>	1.1.3 A/E Support	\$782,032
<b>B. SCHEDULE BASELINE</b>	<b>START</b>	<b>STOP</b>										
1.1.3 A/E Support	10/10/00	09/28/01										
<b>C. COST BASELINE</b>	<b>TOTAL</b>											
1.1.3 A/E Support	\$782,032											

<b>1. PROJECT TITLE / PARTICIPANT</b> Emergency Operations Center / Cerro Grande Rehabilitation	<b>2. DATE</b> 09/05/01	<b>3. IDENTIFICATION NUMBER</b> 100143										
<b>4. WBS ELEMENT CODE</b> 1.1.4	<b>5. WBS ELEMENT TITLE</b> LANL Engineering Support											
<b>6. INDEX LINE NO.</b> 14	<b>7. REVISION AND AUTHORIZATION</b> 0	<b>8. REV DATE</b> 09/05/01										
<b>9. APPROVED CHANGES</b>												
<b>10. SYSTEM DESIGN DESCRIPTION</b> N/A		<b>11. BUDGET AND REPORTING NUMBER</b> N/A: Roll-up										
<b>12. ELEMENT TASK DESCRIPTION</b>  <b>A. TECHNICAL BASELINE</b> Provide engineering support required for participation with A/E engineers during CDR development. Provide design reviews for CDR and design build specification, Provide independent cost estimate review.  <table> <tr> <td><b>B. SCHEDULE BASELINE</b></td> <td><b>START</b></td> <td><b>STOP</b></td> </tr> <tr> <td>1.1.4 LANL Engineering Support</td> <td>11/01/00</td> <td>09/28/01</td> </tr> </table> <table> <tr> <td><b>C. COST BASELINE</b></td> <td><b>TOTAL</b></td> </tr> <tr> <td>1.1.4 LANL Engineering Support</td> <td>\$40,844</td> </tr> </table> <b>INCLUDES CONTINGENCY</b> <input type="checkbox"/>			<b>B. SCHEDULE BASELINE</b>	<b>START</b>	<b>STOP</b>	1.1.4 LANL Engineering Support	11/01/00	09/28/01	<b>C. COST BASELINE</b>	<b>TOTAL</b>	1.1.4 LANL Engineering Support	\$40,844
<b>B. SCHEDULE BASELINE</b>	<b>START</b>	<b>STOP</b>										
1.1.4 LANL Engineering Support	11/01/00	09/28/01										
<b>C. COST BASELINE</b>	<b>TOTAL</b>											
1.1.4 LANL Engineering Support	\$40,844											

<b>1. PROJECT TITLE / PARTICIPANT</b> Emergency Operations Center / Cerro Grande Rehabilitation	<b>2. DATE</b> 09/05/01	<b>3. IDENTIFICATION NUMBER</b> 100143										
<b>4. WBS ELEMENT CODE</b> 1.1.5	<b>5. WBS ELEMENT TITLE</b> ESH											
<b>6. INDEX LINE NO.</b> 21	<b>7. REVISION AND AUTHORIZATION</b> 0	<b>8. REV DATE</b> 09/05/01										
<b>9. APPROVED CHANGES</b>												
<b>10. SYSTEM DESIGN DESCRIPTION</b> N/A		<b>11. BUDGET AND REPORTING NUMBER</b> N/A: Roll-up										
<b>12. ELEMENT TASK DESCRIPTION</b>  <b>A. TECHNICAL BASELINE</b> All ES&H activities required for authorization to proceed with construction. These include NEPA document production and NEPA determination, preliminary hazards assessment, safety plans, and review and approval of the CDR , design -build specifications  <table> <tr> <td><b>B. SCHEDULE BASELINE</b></td> <td><b>START</b></td> <td><b>STOP</b></td> </tr> <tr> <td>1.1.5 ESH</td> <td>09/06/00</td> <td>09/28/01</td> </tr> </table> <table> <tr> <td><b>C. COST BASELINE</b></td> <td><b>TOTAL</b></td> </tr> <tr> <td>1.1.5 ESH</td> <td>\$244,422</td> </tr> </table> <b>INCLUDES CONTINGENCY</b> <input type="checkbox"/>			<b>B. SCHEDULE BASELINE</b>	<b>START</b>	<b>STOP</b>	1.1.5 ESH	09/06/00	09/28/01	<b>C. COST BASELINE</b>	<b>TOTAL</b>	1.1.5 ESH	\$244,422
<b>B. SCHEDULE BASELINE</b>	<b>START</b>	<b>STOP</b>										
1.1.5 ESH	09/06/00	09/28/01										
<b>C. COST BASELINE</b>	<b>TOTAL</b>											
1.1.5 ESH	\$244,422											



<b>1. PROJECT TITLE / PARTICIPANT</b> Emergency Operations Center / Cerro Grande Rehabilitation	<b>2. DATE</b> 09/05/01	<b>3. IDENTIFICATION NUMBER</b> 100143	
<b>4. WBS ELEMENT CODE</b> 1.1.6	<b>5. WBS ELEMENT TITLE</b> JCNNM Support		
<b>6. INDEX LINE NO.</b> 28	<b>7. REVISION AND AUTHORIZATION</b> 0	<b>8. REV DATE</b> 09/05/01	
<b>9. APPROVED CHANGES</b>			
<b>10. SYSTEM DESIGN DESCRIPTION</b> N/A		<b>11. BUDGET AND REPORTING NUMBER</b> N/A: Roll-up	
<b>12. ELEMENT TASK DESCRIPTION</b>			
<b>A. TECHNICAL BASELINE</b> Provide crafts support for conceptual design development, including site surveying and topographic map production.			
<b>B. SCHEDULE BASELINE</b> 1.1.6 JCNNM Support		<b>START</b> 11/01/00	<b>STOP</b> 01/26/01
<b>C. COST BASELINE</b> 1.1.6 JCNNM Support		<b>TOTAL</b> \$11,892	
<b>INCLUDES CONTINGENCY</b> <input type="checkbox"/>			

<b>1. PROJECT TITLE / PARTICIPANT</b> Emergency Operations Center / Cerro Grande Rehabilitation	<b>2. DATE</b> 09/05/01	<b>3. IDENTIFICATION NUMBER</b> 100143					
<b>4. WBS ELEMENT CODE</b> 1.1.7	<b>5. WBS ELEMENT TITLE</b> Acceptance Testing/Startup						
<b>6. INDEX LINE NO.</b> 30	<b>7. REVISION AND AUTHORIZATION</b> 0	<b>8. REV DATE</b> 09/05/01					
<b>9. APPROVED CHANGES</b>							
<b>10. SYSTEM DESIGN DESCRIPTION</b>		<b>11. BUDGET AND REPORTING NUMBER</b> N/A: Roll-up					
<b>12. ELEMENT TASK DESCRIPTION</b>  <b>A. TECHNICAL BASELINE</b> Test facility systems (HVAC, Electrical, Fire Protection, I & C). Final inspect all contractor work. Accept EOC and obtain beneficial occupancy. Test communications systems, security systems, and other LANL installed equipment. Determine readiness for programmatic operations. Close-out the project.  <b>B. SCHEDULE BASELINE</b> <table> <tr> <td>1.1.7 Acceptance Testing/Startup</td> <td><b>START</b> 08/01/03</td> <td><b>STOP</b> 05/31/04</td> </tr> </table>  <b>C. COST BASELINE</b> <table> <tr> <td>1.1.7 Acceptance Testing/Startup</td> <td><b>TOTAL</b> \$40,554</td> </tr> </table>			1.1.7 Acceptance Testing/Startup	<b>START</b> 08/01/03	<b>STOP</b> 05/31/04	1.1.7 Acceptance Testing/Startup	<b>TOTAL</b> \$40,554
1.1.7 Acceptance Testing/Startup	<b>START</b> 08/01/03	<b>STOP</b> 05/31/04					
1.1.7 Acceptance Testing/Startup	<b>TOTAL</b> \$40,554						
<b>INCLUDES CONTINGENCY</b> <input type="checkbox"/>							

<b>1. PROJECT TITLE / PARTICIPANT</b> Emergency Operations Center / Cerro Grande Rehabilitation	<b>2. DATE</b> 09/05/01	<b>3. IDENTIFICATION NUMBER</b> 100143										
<b>4. WBS ELEMENT CODE</b> 1.1.8	<b>5. WBS ELEMENT TITLE</b> External Reviews											
<b>6. INDEX LINE NO.</b> 34	<b>7. REVISION AND AUTHORIZATION</b> 0	<b>8. REV DATE</b> 09/05/01										
<b>9. APPROVED CHANGES</b>												
<b>10. SYSTEM DESIGN DESCRIPTION</b>		<b>11. BUDGET AND REPORTING NUMBER</b> N/A: Roll-up										
<b>12. ELEMENT TASK DESCRIPTION</b>  <b>A. TECHNICAL BASELINE</b> Conduct project management and design reviews by external boards.  <table> <tr> <td><b>B. SCHEDULE BASELINE</b></td> <td><b>START</b></td> <td><b>STOP</b></td> </tr> <tr> <td>1.1.8 External Reviews</td> <td>08/30/01</td> <td>09/27/01</td> </tr> </table> <table> <tr> <td><b>C. COST BASELINE</b></td> <td><b>TOTAL</b></td> </tr> <tr> <td>1.1.8 External Reviews</td> <td>\$8,275</td> </tr> </table> <b>INCLUDES CONTINGENCY</b> <input type="checkbox"/>			<b>B. SCHEDULE BASELINE</b>	<b>START</b>	<b>STOP</b>	1.1.8 External Reviews	08/30/01	09/27/01	<b>C. COST BASELINE</b>	<b>TOTAL</b>	1.1.8 External Reviews	\$8,275
<b>B. SCHEDULE BASELINE</b>	<b>START</b>	<b>STOP</b>										
1.1.8 External Reviews	08/30/01	09/27/01										
<b>C. COST BASELINE</b>	<b>TOTAL</b>											
1.1.8 External Reviews	\$8,275											

1. PROJECT TITLE / PARTICIPANT Emergency Operations Center / Cerro Grande Rehabilitation	2. DATE 09/05/01	3. IDENTIFICATION NUMBER 100143
4. WBS ELEMENT CODE 1.1.9	5. WBS ELEMENT TITLE OPC Contingency	
6. INDEX LINE NO. 37	7. REVISION AND AUTHORIZATION 0	8. REV DATE 09/05/01
9. APPROVED CHANGES		
10. SYSTEM DESIGN DESCRIPTION		11. BUDGET AND REPORTING NUMBER N/A: Roll-up
12. ELEMENT TASK DESCRIPTION		
A. TECHNICAL BASELINE Reserve funds to cover risks associated with OPC activities.		
B. SCHEDULE BASELINE 1.1.9 OPC Contingency	START	STOP
C. COST BASELINE 1.1.9 OPC Contingency	TOTAL	
INCLUDES CONTINGENCY <input checked="" type="checkbox"/>		

<b>1. PROJECT TITLE / PARTICIPANT</b> Emergency Operations Center / Cerro Grande Rehabilitation	<b>2. DATE</b> 09/05/01	<b>3. IDENTIFICATION NUMBER</b> 100143										
<b>4. WBS ELEMENT CODE</b> 1.2	<b>5. WBS ELEMENT TITLE</b> Total Estimated Cost (TEC)											
<b>6. INDEX LINE NO.</b> 39	<b>7. REVISION AND AUTHORIZATION</b> 0	<b>8. REV DATE</b> 09/05/01										
<b>9. APPROVED CHANGES</b>												
<b>10. SYSTEM DESIGN DESCRIPTION</b>		<b>11. BUDGET AND REPORTING NUMBER</b> N/A: Roll-up										
<b>12. ELEMENT TASK DESCRIPTION</b>  <b>A. TECHNICAL BASELINE</b> All activities funded with capital funds including design, construction and project management.  <table> <tr> <td><b>B. SCHEDULE BASELINE</b></td> <td><b>START</b></td> <td><b>STOP</b></td> </tr> <tr> <td>1.2 Total Estimated Cost (TEC)</td> <td>09/28/01</td> <td>06/01/04</td> </tr> </table> <table> <tr> <td><b>C. COST BASELINE</b></td> <td><b>TOTAL</b></td> </tr> <tr> <td>1.2 Total Estimated Cost (TEC)</td> <td>\$19,955,551</td> </tr> </table> <b>INCLUDES CONTINGENCY</b> <input checked="" type="checkbox"/>			<b>B. SCHEDULE BASELINE</b>	<b>START</b>	<b>STOP</b>	1.2 Total Estimated Cost (TEC)	09/28/01	06/01/04	<b>C. COST BASELINE</b>	<b>TOTAL</b>	1.2 Total Estimated Cost (TEC)	\$19,955,551
<b>B. SCHEDULE BASELINE</b>	<b>START</b>	<b>STOP</b>										
1.2 Total Estimated Cost (TEC)	09/28/01	06/01/04										
<b>C. COST BASELINE</b>	<b>TOTAL</b>											
1.2 Total Estimated Cost (TEC)	\$19,955,551											

<b>1. PROJECT TITLE / PARTICIPANT</b> Emergency Operations Center / Cerro Grande Rehabilitation	<b>2. DATE</b> 09/05/01	<b>3. IDENTIFICATION NUMBER</b> 100143										
<b>4. WBS ELEMENT CODE</b> 1.2.1	<b>5. WBS ELEMENT TITLE</b> Project Management											
<b>6. INDEX LINE NO.</b> 40	<b>7. REVISION AND AUTHORIZATION</b> 0	<b>8. REV DATE</b> 09/05/01										
<b>9. APPROVED CHANGES</b>												
<b>10. SYSTEM DESIGN DESCRIPTION</b>		<b>11. BUDGET AND REPORTING NUMBER</b> N/A: Roll-up										
<b>12. ELEMENT TASK DESCRIPTION</b>  <b>A. TECHNICAL BASELINE</b> Project management activities between CD2/CD3 and CD4. Includes general project management, cost/schedule accounting, QA/QC, administrative support.  <table> <tr> <td><b>B. SCHEDULE BASELINE</b></td> <td><b>START</b></td> <td><b>STOP</b></td> </tr> <tr> <td>1.2.1 Project Management</td> <td>09/28/01</td> <td>09/29/03</td> </tr> </table> <table> <tr> <td><b>C. COST BASELINE</b></td> <td><b>TOTAL</b></td> </tr> <tr> <td>1.2.1 Project Management</td> <td>\$578,824</td> </tr> </table> <b>INCLUDES CONTINGENCY</b> <input type="checkbox"/>			<b>B. SCHEDULE BASELINE</b>	<b>START</b>	<b>STOP</b>	1.2.1 Project Management	09/28/01	09/29/03	<b>C. COST BASELINE</b>	<b>TOTAL</b>	1.2.1 Project Management	\$578,824
<b>B. SCHEDULE BASELINE</b>	<b>START</b>	<b>STOP</b>										
1.2.1 Project Management	09/28/01	09/29/03										
<b>C. COST BASELINE</b>	<b>TOTAL</b>											
1.2.1 Project Management	\$578,824											

<b>1. PROJECT TITLE / PARTICIPANT</b> Emergency Operations Center / Cerro Grande Rehabilitation	<b>2. DATE</b> 09/05/01	<b>3. IDENTIFICATION NUMBER</b> 09/05/01										
<b>4. WBS ELEMENT CODE</b> 1.2.2	<b>5. WBS ELEMENT TITLE</b> Design-Build Contract											
<b>6. INDEX LINE NO.</b> 46	<b>7. REVISION AND AUTHORIZATION</b> 0	<b>8. REV DATE</b> 09/05/01										
<b>9. APPROVED CHANGES</b>												
<b>10. SYSTEM DESIGN DESCRIPTION</b>		<b>11. BUDGET AND REPORTING NUMBER</b> N/A: Roll-up										
<b>12. ELEMENT TASK DESCRIPTION</b>  <b>A. TECHNICAL BASELINE</b> Design & construct the EOC building. Work performed by contractor.  <table> <tr> <td><b>B. SCHEDULE BASELINE</b></td> <td><b>START</b></td> <td><b>STOP</b></td> </tr> <tr> <td>1.2.2 Design-Build Contract</td> <td>09/28/01</td> <td>06/01/04</td> </tr> </table> <table> <tr> <td><b>C. COST BASELINE</b></td> <td><b>TOTAL</b></td> </tr> <tr> <td>1.2.2 Design-Build Contract</td> <td>\$15,124,806</td> </tr> </table> <b>INCLUDES CONTINGENCY</b> <input type="checkbox"/>			<b>B. SCHEDULE BASELINE</b>	<b>START</b>	<b>STOP</b>	1.2.2 Design-Build Contract	09/28/01	06/01/04	<b>C. COST BASELINE</b>	<b>TOTAL</b>	1.2.2 Design-Build Contract	\$15,124,806
<b>B. SCHEDULE BASELINE</b>	<b>START</b>	<b>STOP</b>										
1.2.2 Design-Build Contract	09/28/01	06/01/04										
<b>C. COST BASELINE</b>	<b>TOTAL</b>											
1.2.2 Design-Build Contract	\$15,124,806											

<b>1. PROJECT TITLE / PARTICIPANT</b> Emergency Operations Center / Cerro Grande Rehabilitation	<b>2. DATE</b> 09/05/01	<b>3. IDENTIFICATION NUMBER</b> 100143										
<b>4. WBS ELEMENT CODE</b> 1.2.3	<b>5. WBS ELEMENT TITLE</b> LANL Design Support											
<b>6. INDEX LINE NO.</b> 48	<b>7. REVISION AND AUTHORIZATION</b> 0	<b>8. REV DATE</b> 09/05/01										
<b>9. APPROVED CHANGES</b>												
<b>10. SYSTEM DESIGN DESCRIPTION</b>		<b>11. BUDGET AND REPORTING NUMBER</b> N/A: Roll-up										
<b>12. ELEMENT TASK DESCRIPTION</b>  <b>A. TECHNICAL BASELINE</b> All LANL activities required to provide design input to the contractor, to review contractor designs, and to create design documents for LANL supplied systems. Includes LANL technical reviews & issue resolution during construction.  <table> <tr> <td><b>B. SCHEDULE BASELINE</b></td> <td><b>START</b></td> <td><b>STOP</b></td> </tr> <tr> <td>1.2.3 LANL Design Support</td> <td>10/29/01</td> <td>09/29/03</td> </tr> </table> <table> <tr> <td><b>C. COST BASELINE</b></td> <td><b>TOTAL</b></td> </tr> <tr> <td>1.2.3 LANL Design Support</td> <td>\$159,794</td> </tr> </table>			<b>B. SCHEDULE BASELINE</b>	<b>START</b>	<b>STOP</b>	1.2.3 LANL Design Support	10/29/01	09/29/03	<b>C. COST BASELINE</b>	<b>TOTAL</b>	1.2.3 LANL Design Support	\$159,794
<b>B. SCHEDULE BASELINE</b>	<b>START</b>	<b>STOP</b>										
1.2.3 LANL Design Support	10/29/01	09/29/03										
<b>C. COST BASELINE</b>	<b>TOTAL</b>											
1.2.3 LANL Design Support	\$159,794											
<b>INCLUDES CONTINGENCY</b> <input type="checkbox"/>												



1. PROJECT TITLE / PARTICIPANT Emergency Operations Center / Cerro Grande Rehabilitation	2. DATE 09/05/01	3. IDENTIFICATION NUMBER 100143
4. WBS ELEMENT CODE 1.2.4	5. WBS ELEMENT TITLE LANL Construction Management	
6. INDEX LINE NO. 51	7. REVISION AND AUTHORIZATION 0	8. REV DATE 09/05/01
9. APPROVED CHANGES		
10. SYSTEM DESIGN DESCRIPTION		11. BUDGET AND REPORTING NUMBER N/A: Roll-up
12. ELEMENT TASK DESCRIPTION		
A. TECHNICAL BASELINE LANL activities to monitor the work site.		
B. SCHEDULE BASELINE 1.2.4 LANL Construction Management	START 02/20/02	STOP 09/30/03
C. COST BASELINE 1.2.4 LANL Construction Management	TOTAL \$55,594	
INCLUDES CONTINGENCY <input type="checkbox"/>		

<b>1. PROJECT TITLE / PARTICIPANT</b> Emergency Operations Center / Cerro Grande Rehabilitation	<b>2. DATE</b> 09/05/01	<b>3. IDENTIFICATION NUMBER</b> 100143										
<b>4. WBS ELEMENT CODE</b> 1.2.5	<b>5. WBS ELEMENT TITLE</b> Construction Management Oversight											
<b>6. INDEX LINE NO.</b> 53	<b>7. REVISION AND AUTHORIZATION</b> 0	<b>8. REV DATE</b> 09/05/01										
<b>9. APPROVED CHANGES</b>												
<b>10. SYSTEM DESIGN DESCRIPTION</b>		<b>11. BUDGET AND REPORTING NUMBER</b> N/A: Roll-up										
<b>12. ELEMENT TASK DESCRIPTION</b>  <b>A. TECHNICAL BASELINE</b> Includes daily construction inspection, contractor performance monitoring, contractor submittal review, and engineering change notice approval.  <table> <tr> <td><b>B. SCHEDULE BASELINE</b></td> <td><b>START</b></td> <td><b>STOP</b></td> </tr> <tr> <td>1.2.5 Construction Management Oversight</td> <td>10/29/01</td> <td>09/30/03</td> </tr> </table> <table> <tr> <td><b>C. COST BASELINE</b></td> <td><b>TOTAL</b></td> </tr> <tr> <td>1.2.5 Construction Management Oversight</td> <td>\$447,101</td> </tr> </table>			<b>B. SCHEDULE BASELINE</b>	<b>START</b>	<b>STOP</b>	1.2.5 Construction Management Oversight	10/29/01	09/30/03	<b>C. COST BASELINE</b>	<b>TOTAL</b>	1.2.5 Construction Management Oversight	\$447,101
<b>B. SCHEDULE BASELINE</b>	<b>START</b>	<b>STOP</b>										
1.2.5 Construction Management Oversight	10/29/01	09/30/03										
<b>C. COST BASELINE</b>	<b>TOTAL</b>											
1.2.5 Construction Management Oversight	\$447,101											
<b>INCLUDES CONTINGENCY</b> <input type="checkbox"/>												

<b>1. PROJECT TITLE / PARTICIPANT</b> Emergency Operations Center / Cerro Grande Rehabilitation	<b>2. DATE</b> 09/05/01	<b>3. IDENTIFICATION NUMBER</b> 100143										
<b>4. WBS ELEMENT CODE</b> 1.2.6	<b>5. WBS ELEMENT TITLE</b> ESH											
<b>6. INDEX LINE NO.</b> 55	<b>7. REVISION AND AUTHORIZATION</b> 0	<b>8. REV DATE</b> 09/05/01										
<b>9. APPROVED CHANGES</b>												
<b>10. SYSTEM DESIGN DESCRIPTION</b>		<b>11. BUDGET AND REPORTING NUMBER</b> N/A: Roll-up										
<b>12. ELEMENT TASK DESCRIPTION</b>  <b>A. TECHNICAL BASELINE</b> Includes construction safety plan review and approval and construction safety inspections.  <table> <tr> <td><b>B. SCHEDULE BASELINE</b></td> <td><b>START</b></td> <td><b>STOP</b></td> </tr> <tr> <td>1.2.6 ESH</td> <td>02/20/02</td> <td>09/30/03</td> </tr> </table> <table> <tr> <td><b>C. COST BASELINE</b></td> <td><b>TOTAL</b></td> </tr> <tr> <td>1.2.6 ESH</td> <td>\$19,591</td> </tr> </table> <b>INCLUDES CONTINGENCY</b> <input type="checkbox"/>			<b>B. SCHEDULE BASELINE</b>	<b>START</b>	<b>STOP</b>	1.2.6 ESH	02/20/02	09/30/03	<b>C. COST BASELINE</b>	<b>TOTAL</b>	1.2.6 ESH	\$19,591
<b>B. SCHEDULE BASELINE</b>	<b>START</b>	<b>STOP</b>										
1.2.6 ESH	02/20/02	09/30/03										
<b>C. COST BASELINE</b>	<b>TOTAL</b>											
1.2.6 ESH	\$19,591											

<b>1. PROJECT TITLE / PARTICIPANT</b> Emergency Operations Center / Cerro Grande Rehabilitation	<b>2. DATE</b> 09/05/01	<b>3. IDENTIFICATION NUMBER</b> 100143											
<b>4. WBS ELEMENT CODE</b> 1.2.7	<b>5. WBS ELEMENT TITLE</b> LANL Construction												
<b>6. INDEX LINE NO.</b> 57	<b>7. REVISION AND AUTHORIZATION</b> 0	<b>8. REV DATE</b> 09/05/01											
<b>9. APPROVED CHANGES</b>													
<b>10. SYSTEM DESIGN DESCRIPTION</b>		<b>11. BUDGET AND REPORTING NUMBER</b> N/A: Roll-up											
<b>12. ELEMENT TASK DESCRIPTION</b>  <b>A. TECHNICAL BASELINE</b> Includes all LANL special systems provisions and installation.  <table> <tr> <td><b>B. SCHEDULE BASELINE</b></td> <td><b>START</b></td> <td><b>STOP</b></td> </tr> <tr> <td>1.2.7 LANL Construction</td> <td>02/20/03</td> <td>09/02/03</td> </tr> </table> <table> <tr> <td><b>C. COST BASELINE</b></td> <td><b>TOTAL</b></td> </tr> <tr> <td>1.2.7 LANL Construction</td> <td>\$1,215,552</td> </tr> </table> <b>INCLUDES CONTINGENCY</b> <input type="checkbox"/>				<b>B. SCHEDULE BASELINE</b>	<b>START</b>	<b>STOP</b>	1.2.7 LANL Construction	02/20/03	09/02/03	<b>C. COST BASELINE</b>	<b>TOTAL</b>	1.2.7 LANL Construction	\$1,215,552
<b>B. SCHEDULE BASELINE</b>	<b>START</b>	<b>STOP</b>											
1.2.7 LANL Construction	02/20/03	09/02/03											
<b>C. COST BASELINE</b>	<b>TOTAL</b>												
1.2.7 LANL Construction	\$1,215,552												

<b>1. PROJECT TITLE / PARTICIPANT</b> Emergency Operations Center / Cerro Grande Rehabilitation	<b>2. DATE</b> 09/05/01	<b>3. IDENTIFICATION NUMBER</b> 100143										
<b>4. WBS ELEMENT CODE</b> 1.2.8	<b>5. WBS ELEMENT TITLE</b> JCNNM Support											
<b>6. INDEX LINE NO.</b> 61	<b>7. REVISION AND AUTHORIZATION</b> 0	<b>8. REV DATE</b> 09/05/01										
<b>9. APPROVED CHANGES</b>												
<b>10. SYSTEM DESIGN DESCRIPTION</b>		<b>11. BUDGET AND REPORTING NUMBER</b> N/A: Roll-up										
<b>12. ELEMENT TASK DESCRIPTION</b>  <b>A. TECHNICAL BASELINE</b> JCNNM construction activities including security fence alterations and utilities tie-ins.  <table> <tr> <td><b>B. SCHEDULE BASELINE</b></td> <td><b>START</b></td> <td><b>STOP</b></td> </tr> <tr> <td>1.2.8 JCNNM Support</td> <td>04/03/03</td> <td>07/31/03</td> </tr> </table> <table> <tr> <td><b>C. COST BASELINE</b></td> <td><b>TOTAL</b></td> </tr> <tr> <td>1.2.8 JCNNM Support</td> <td>\$115,000</td> </tr> </table> <b>INCLUDES CONTINGENCY</b> <input type="checkbox"/>			<b>B. SCHEDULE BASELINE</b>	<b>START</b>	<b>STOP</b>	1.2.8 JCNNM Support	04/03/03	07/31/03	<b>C. COST BASELINE</b>	<b>TOTAL</b>	1.2.8 JCNNM Support	\$115,000
<b>B. SCHEDULE BASELINE</b>	<b>START</b>	<b>STOP</b>										
1.2.8 JCNNM Support	04/03/03	07/31/03										
<b>C. COST BASELINE</b>	<b>TOTAL</b>											
1.2.8 JCNNM Support	\$115,000											

<b>1. PROJECT TITLE / PARTICIPANT</b> Emergency Operations Center / Cerro Grande Rehabilitation	<b>2. DATE</b> 09/05/01	<b>3. IDENTIFICATION NUMBER</b> 100143										
<b>4. WBS ELEMENT CODE</b> 1.2.9	<b>5. WBS ELEMENT TITLE</b> TEC Contingency											
<b>6. INDEX LINE NO.</b> 63	<b>7. REVISION AND AUTHORIZATION</b> 0	<b>8. REV DATE</b> 09/05/01										
<b>9. APPROVED CHANGES</b>												
<b>10. SYSTEM DESIGN DESCRIPTION</b>		<b>11. BUDGET AND REPORTING NUMBER</b> N/A: Roll-up										
<b>12. ELEMENT TASK DESCRIPTION</b>  <b>A. TECHNICAL BASELINE</b> Covers uncertainty in TEC, inflation during the project, and LANL burdens  <table> <tr> <td><b>B. SCHEDULE BASELINE</b></td> <td><b>START</b></td> <td><b>STOP</b></td> </tr> <tr> <td>1.2.9 TEC Contingency</td> <td>10/29/01</td> <td>06/01/04</td> </tr> </table> <table> <tr> <td><b>C. COST BASELINE</b></td> <td><b>TOTAL</b></td> </tr> <tr> <td>1.2.9 TEC Contingency</td> <td>\$2,239,289</td> </tr> </table> <b>INCLUDES CONTINGENCY</b> <input checked="" type="checkbox"/>			<b>B. SCHEDULE BASELINE</b>	<b>START</b>	<b>STOP</b>	1.2.9 TEC Contingency	10/29/01	06/01/04	<b>C. COST BASELINE</b>	<b>TOTAL</b>	1.2.9 TEC Contingency	\$2,239,289
<b>B. SCHEDULE BASELINE</b>	<b>START</b>	<b>STOP</b>										
1.2.9 TEC Contingency	10/29/01	06/01/04										
<b>C. COST BASELINE</b>	<b>TOTAL</b>											
1.2.9 TEC Contingency	\$2,239,289											